RAILROAD

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OCTOBER,

MAGAZINE

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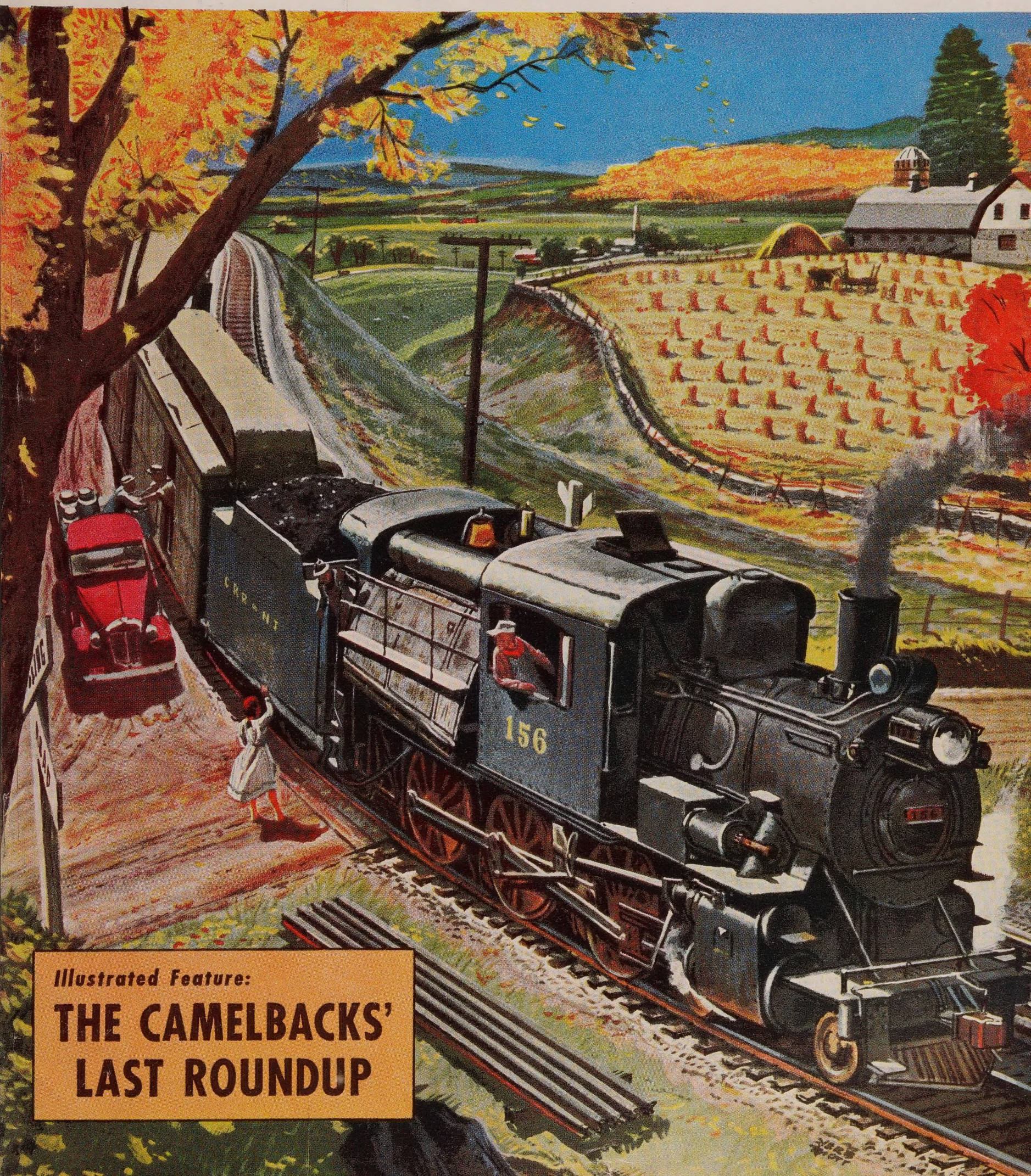

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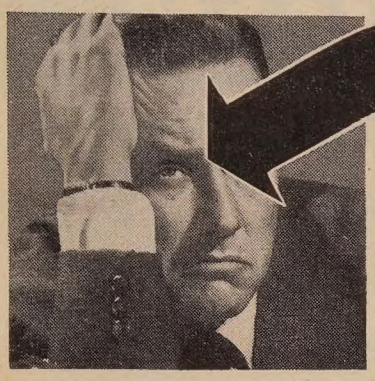

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It's in good taste everywhere – in the den, on the desk, in the children's room, on the porch, or as a TV lamp – everywhere in the house.

Keynote is authentic reproduction of the 1910 Maxwell automobile, with the body of red and contrasting pieces in gold and black. The auto is molded of high impact styrene.

Available with handmade Scotch plaid rectangular shade with red trim as shown, or solid red washable fibre-glass rectangular shade with gold lacing.

Lamp Base is of heavy cast iron, brush painted soft black with felt pads.

Overall height 13½ inches. Base measures 8 inches by 4½ inches.

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☐ Scotch Plaid ☐ Solid Red

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The Magazine of Adventurous Railroading

Vol. 65, No. 2 **OCTOBER, 1954** **50 Cents**

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Change of Address: Postmaster—Please mail Form 3579 notices to Railroad Magazine, 205 East 42nd Street, New York 17, N. Y.

Published monthly by Popular Publications, Inc., at McCall Street, Dayton 1, Ohio. Editorial and executive offices, 205 East 42nd Street, New York 17, N. Y. Henry Steeger, President. John J. McVarish, Treasurer. Entered as second-class matter at Post Office in Kokomo, Ind. Re-entry applied for as second-class matter at Dayton, Ohio.

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I WILL TRAIN YOU AT HOME FOR GOOD PAY JOBS IN RADIO-TELEVISION

J. E. SMITH has trained more men for Radio-Television than any other man. OUR 40th YEAR.

America's Fast Growing Industry Offers You Good Pay—Bright Future—Security

I TRAINED THESE MEN

"Started to repair sets six months after enrolling. Earned $12 to $15 a week in spare time."—Adam Kramlik, Jr., Sunneytown, Pennsylvania.

"Up to our necks in Radio-Television work. Four other NRI men work here. Am happy with my work."—Glen Peterson, Bradford, Ont., Canada.

"Am doing Radio and Television Servicing full time. Now have my own shop. I owe my success to N.R.I."—Curtis Stath, Ft. Madison, Iowa.

"Am with WCOC. NRI course can't be beat. No trouble passing 1st class Radio-phone license exam."—Jesse W. Parker, Meridian, Mississippi.

"By graduation, had paid for course, car, testing equipment. Can service toughest jobs."—E. J. Streitenberger, New Boston, Ohio.

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Start Soon to Make $10, $15 a Week Extra Fixing Sets

Keep your job while training. I start sending you special booklets that show you how to fix sets the day you enroll. Multitester built with parts I send helps you make $10, $15 a week extra fixing sets while training. Many start their own Radio-Television business with spare time earnings.

My Training Is Up-To-Date

You benefit by my 40 years' experience training men at home. Well illustrated lessons give you basic principles you need. Skillfully developed kits of parts I send (see below) "bring to life" things you learn from lessons.

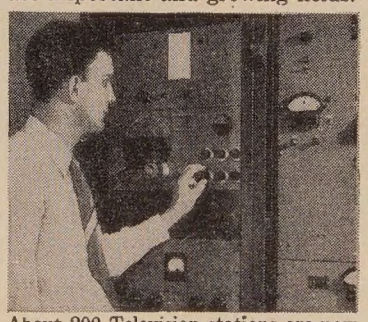
AVAILABLE TO VETERANS UNDER G.I. BILLS

You Learn by Practicing with Parts I Send

Nothing takes the place of PRACTICAL EXPERIENCE. That's why NRI training is based on LEARNING BY DOING. You use parts I furnish to build many circuits common to Radio and Television. As part of my Communications Course, you build many things, including low power transmitter shown at left. You put it "on the air," perform procedures required of broadcasting operators. With my Servicing Course you build modern Radio, etc. Use Multitester you build to make money fixing sets. Many students make $10, $15 week extra fixing neighbors' sets in spare time while training. Coupon below will bring book showing other equipment you build. It's all yours to keep.

The Tested Way To Better Pay!

Television Making Good Jobs, Prosperity—Even without Television, Radio is bigger than ever. 115 million home and auto Radios to be serviced. Over 3000 Radio broadcasting stations use operators, technicians, engineers. Government, Aviation, Police, Ship, Micro-wave Relay, Two-Way Radio Communications for buses, taxis, trucks, etc., are important and growing fields. Television is moving ahead fast.



About 200 Television stations are now on the air. Hundreds of others being built. Good TV jobs opening up for Technicians, Operators, etc.

25 million homes now have Television sets. Thousands more are being sold every week. Get a job or have your own business selling, installing, servicing.

Radio-TV Needs Men of Action—Mail Coupon

Act now to get more of the good things of life. Actual lesson proves my training is practical, thorough. 64-page book shows good job opportunities for you in many fields. Take NRI training for as little as $5 a month. Many graduates make more than total cost of training in two weeks. Mail coupon now. J. E. SMITH, President, National Radio Institute, Dept. 4KR4, Washington 9, D. C. OUR 40TH YEAR.

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Mail me Sample Lesson and 64-page Book, FREE.
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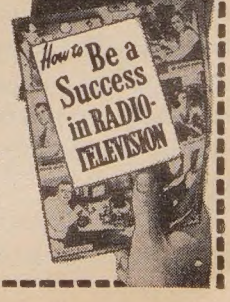


MAIL CAR

Running Orders, Waybills, and Sandhouse Gossip—from Railroaders, Fans, and the Editorial Crew

Chicago & North Western

PHOTO TAKEN ON BOARD A TRAIN. When the Chicago & North Western put two new *City of Denver* streamliners into service, Miss Adrienne Falcon added her personal charm to *The Pub* while one of the trains was being exhibited. *The Pub* is a coach lounge car patterned after an old-style English tavern with leaded glass windows, oak walls, oak floors, and oak-beamed ceiling. Adrienne dressed as a barmaid.

48 YEARS ago this October the first issue of *Railroad,* with a bright red cover, dotted the newsstands of the States and Canada like a million-acre strawberry patch. Originally titled *Railroad Man's Magazine,* it was published by Frank A. Munsey, a former telegraph operator, as part of his chain of magazines and daily newspapers.

The first issue carried a wide variety of railroad fact articles, fiction, departments and miscellany, but no pictures. Lead feature: "A Whole Nation on Wheels," by Gilson Willets. In a front-page editorial Mr. Munsey stated: "The railroad, second only to religion, has been the greatest civilizing and enlightening influence in the world."

This claim is open to question. Strong cases could be made for art, the printing press, water craft, and the school. Even so, it is interesting to wonder how our North American West would have been built up without the railroad.

To the pioneer settlers in remote communities, the night gleam of an engine headlight on the prairie or on a mountain grade was a ray of hope, a reassurance that they were not alone. We must never forget that.

The railroads which built the West are still vital to our democratic way of life. Without them today, our economic system would collapse. That, too, is worth remembering.

MUNSEY'S editorial also declared: "My experience with the publishing business justifies me in saying that if all fiction were to be eliminated from the magazines of America, their combined circulation would speedily dwindle to not over 20 percent of their present total."

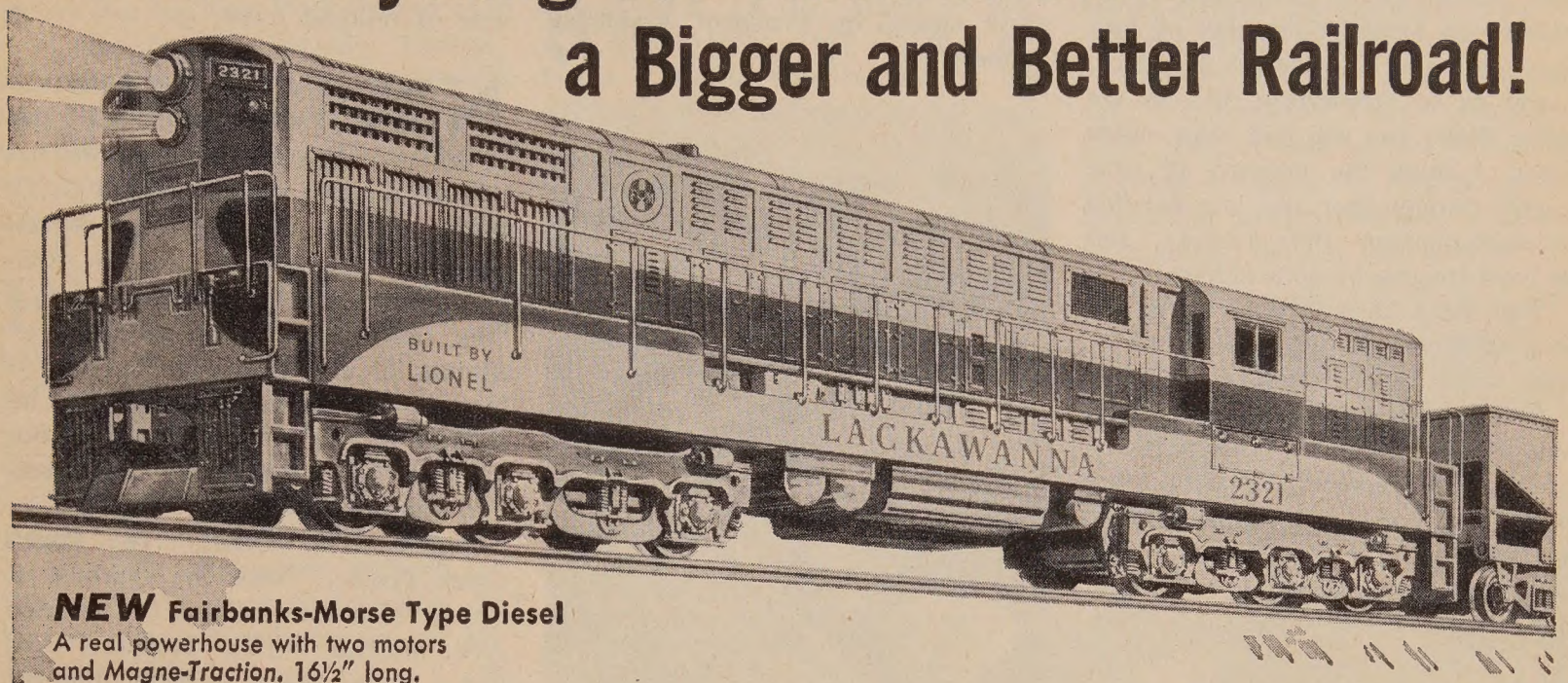
The "20 percent" was, of course, a mere guess. Today's figure would probably run higher. But the principle remains the same. If you don't believe it, ask yourself, "How many *non*-fiction magazines have really big circulations?" Can you name more than two or three?

Story-telling is deeply ingrained in human nature. Long before the dawn of history, naked cave men and women spun their tales of heroic deeds and primitive love around the open fire. People have always enjoyed stories. It's a pretty safe bet they always will. And that is why, in addition to facts and pictures, *Railroad Magazine* prints the best obtainable railroad fiction every month. ●

A READER'S CHOICE. "I do *not* like overseas articles, too much juice, or scale or blueprint drawings," writes H. H. Hoover, director, National Railway Historical Society, K. C. Chapter, 1638 Poplar, Kansas City 1, Mo. "I *do* like the following, in this order: all illustrated feature articles, including histories of old roads, with maps; *Flagstops, Switch List, Mail Car, Information Booth,* and *Books of the Rails.*"

MORE REALISM

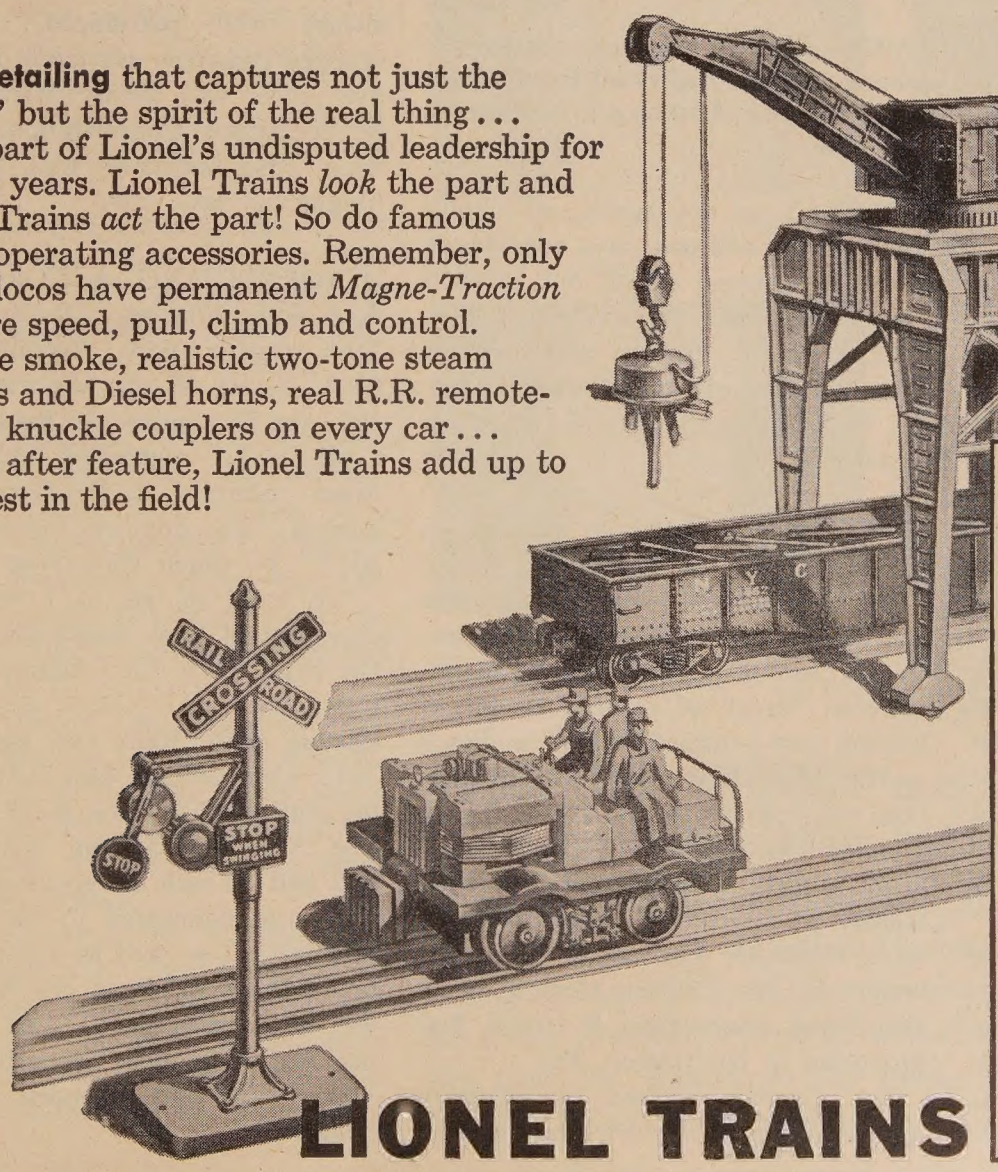
...in Everything You Need to Build a Bigger and Better Railroad!



NEW Fairbanks-Morse Type Diesel
A real powerhouse with two motors and *Magne-Traction*. 16½" long.

LIONEL TRAINS WITH MAGNE-TRACTION

Scale detailing that captures not just the "letter" but the spirit of the real thing... that's part of Lionel's undisputed leadership for over 50 years. Lionel Trains *look* the part and Lionel Trains *act* the part! So do famous Lionel operating accessories. Remember, only Lionel locos have permanent *Magne-Traction* for more speed, pull, climb and control. Genuine smoke, realistic two-tone steam whistles and Diesel horns, real R.R. remote-control knuckle couplers on every car... feature after feature, Lionel Trains add up to the finest in the field!



NEW Portal Gantry Crane. Simulates heavy bridge construction with famous Bucyrus cab. 3-lever control for free-swing boom with electro-magnet.

NEW Section Gang Car. With own motor operating from track power. Reverses direction when either buffer plate strikes object.

NEW Banjo Signal. As train approaches, red light is illuminated and stop Banjo Sign swings back and forth over red light. All automatic!

LIONEL TRAINS

STEAM POWER is still being used by the Illinois Central on its Chicago-New Orleans main line, which passes just a block from his home, reports Wesley M. Stead, Box 592, Effingham, Ill.

"There are 2500s and 2600s (4-8-2 types) on through freights," he says, "and 1200s, 1300s, 1400s and 1500s (Mikes) on local freights, but all passenger trains on this line are dieselized. If you go to Stewardson, Ill., on the Nickel Plate, you will find some steam power. I think the majority of time freights through that town are handled by classy-looking 700s (2-8-4), and the local freights by 600s (Mikes).

"The B&O keeps a few steam engines at Flora, Ill., 32 miles south of here, while on their line from Flora to Beardstown you can see Consolidations of the 2700 and 2800 series in service. I understand that the New York Central is still using some steam through Mattoon, Ill. When I visited there a few months ago I saw two of their monster 6000s in the yards." ●

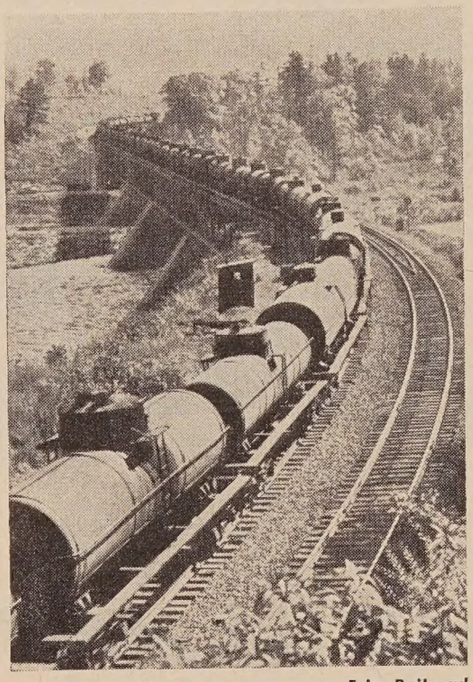
49 YEARS of continuous service as station agent for the St. Johnsbury & Lake Champlain has just ended with the retirement of Perley J. Pressey from the depot at Danville, Vt., reports Benjamin F. Heath, St. Johnsbury, Vt. Few men have been more closely identified with railroading. When he was only a year old, the future agent moved with his family into the second floor of a depot, and he has stuck close to the rails ever since.

Now, the birds that live in Vermont get very hungry, especially in winter. Mr. Pressey made a practice of feeding them daily from a supply of grain, and occasionally suet, that he kept in the station for such purpose. Men who know him well wouldn't be surprised to see the spry old pensioner trudging through the snow to the depot at frequent intervals this winter with food for the bluejays and starlings.

He is also fond of animals—during his long career several dogs were companions of his work—and he kept his scarred old desk stocked with candy for the many children in town who visited him. Somehow, the ancient depot isn't the same without Mr. Pressey. ●

TOY TRAIN nearly proved fatal to Timothy Roberson, age three, 210 E. Eichel Ave., Evansville, Ind. The little fellow was playing with it on the Chicago & Eastern Illinois tracks near his home when a switch engine suddenly bore down on him. Too late to stop in time, the hogger caught sight of Tim and big-holed her.

Herman Schaefer, a switchman riding the footboard, also saw the lad, leaned out in front of the yard goat, and swept him into the clear. For this heroic act, Schaefer was given an engraved railroad watch and an engraved scroll signed by President Roddewig of the C&EI. ●



Erie Railroad

TANK TRAIN curves sinuously across an Erie Railroad trestle carrying oil for America's industrial machine.

TEXAS has not merely *one* county with no railroad, as a contributor to this department stated, but 16 such counties, we learn from G. F. Purdue, traffic manager, auditor, and assistant superintendent of the Moscow, Camden & San Augustine, with offices at Camden, Texas. ●

FINAL steam engine to haul a passenger train out of Syracuse, N. Y., left the New York Central station one day last summer with a load of sentimental customers, who rode the steam-powered "streak of varnish" as far as Lacona and returned behind a diesel.

After that, the steamer, a Consolidation, was delivered to the new Rail City Museum on Scenic Highway near Sandy Creek, a setup owned by Dr. Stanley A. Groman, 1303 Midland Ave., Syracuse. The engine had been bought by Dr. Groman from the now abandoned Huntington & Broad Top Mountain at Huntington, Pa.

Dr. Groman started his museum last year upon his return from a vacation in the West, where he purchased a movie train, *The Kit Carson,* with an 18-ton saddle-tank engine and tender, from a film badman, Bert Cresto of Gallup, N. M. The museum, not yet completed, will include an oldtime railroad depot, a post office, a firehouse, a country store, a stockpen, horse trails, a beach frontage, and about a mile of railroad track. ●

NORFOLK & WESTERN story by H. Reid (July issue) was "one of the best articles your magazine has carried in years," according to C. G. Price, Jr., vice president and general manager, Shenandoah Central Railroad, Box 324, Harrisonburg, Va. "Mr. Reid must have done a vast amount of research, and his style is breezy and refreshing. I can't get interested in very technical material nor pieces that are written like a corporation's annual report."

Another July article, "The Pope's Creek Peddler," wins the approval of Kelvin Mac Kavanaugh, 160 Marion Ave., Merrick, N. Y., "because I lived just a stone's throw from the line for 13 years."

"Prior to World War II," he states, "we had an annual excursion from Pope's Creek to Atlantic City. It was always well patronized. The line dropped passenger service in 1949. Motive power was mostly Mikados, with an occasional Consolidation, until an Alco road switcher took over the freight run last year." ●

CORRECTING A CORRECTOR. Some time ago, David L. Joslyn, 2164 Castro Way, Sacramento 18, Calif., wrote to this department: "In 1902 the SP received 16 Baldwin locos, Class A-1, numbered 3000-3015." More recently, S. E. Turner commented, "The numbers did not stop at 3015." To which Dave now replies:

"In front of me as I write is SP classification book dated Jan. 1, 1907. On page 71 it lists Atlantic locomotives, Class A-1—then classed NA, starting with 3000 and ending with 3015. Commencing with 3016 and ending with 3024 is Class A-2 (then NB). The A-1s had 34-inch drivers; Class A-2 had 76-inch drivers. A-1s had the main rod connected to the first pair of drivers. I worked as a draftsman on both classes of those old Atlantics at the Sacramento shops. And I remember that A-2s had Vanderbilt boilers, while A-1s had extended wagon-top boilers." ●

FREAK? "After reading so many divergent readers' comments on your editorial policy, I am inclined to wonder whether or not I am a freak," states David K. Johnson, photographer, 3 Roosevelt Ave., Dover, N. H., "because I am interested in railroads—period. That includes everything which runs on flanged wheels, whether it be a giant like the New York Central or a short line like the Amador Central, whether it be a subway or elevated line, a trolley, or a horsecar. My advice is: please continue to cover *all* phases of railroading, without apology or prejudice." ●

HE HASN'T missed an issue of *Railroad* since 1929—that's the boast of W. H. Graham, Box 771, Belle, W. Va., who railroaded for 10 years, beginning in 1919. Mr. Graham's main interests include logging roads and their power—Shays, Climaxes, and Heisler geared engines—and the old Sewell Valley line (now part of the C&O). Maybe some reader could relate interesting experiences on the SV. We're waiting. ●

ANOTHER long-time reader, A. D. Slater, 1596 Wood Road, Cleveland Heights 21, O., urges us to print more cab-action pictures similar to our July cover. He says: "Two short fiction stories per month are just about right. Your true tales, *Information Booth,* and *Model Trading Post* are tops." ●

A PENNSY K-4 still handles one of the New York - Atlantic City through trains, but all the others are now diesel-powered, reports John Dzivbko, 240 21st St., Irvington 11, N. J.

"I was surprised to see four steam engines the other day at Millville, N. J.," he writes, "three Pennsys (H-9, H-10, B-6) and a Reading G-2 Pacific. A freight brakeman told me that only one steam-powered passenger train runs out of Millville; it goes to Camden and is pulled by the G-2.

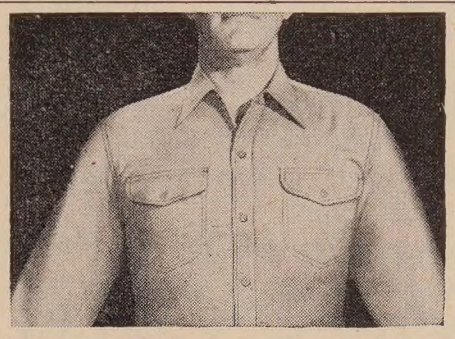
"The Atlantic City engine terminal houses a Reading G-2sa or G-3 Pacific, and Pennsy K-4s, H-9s, B-6ab and a single A-5s. The A-5s is needed for sharp curves on the industrial siding near Baltic Avenue.

"Later, visiting the Pennsylvania's West Philadelphia roundhouse, I saw a lot of dead steam power of the K-4, L-1, B-6, H-9 and H-10 classes; but I learned there are only two live PRR steam locomotives in the Philadelphia area. One is a K-4s in stand-by service and the other an L-1s which pulls freight from Camden at 3 p.m. daily. Incidentally, this latter is the only live L-1s left on the New York or Atlantic division. I say *live,* because three oil-converted L-1s engines supply steam-heat service in the Sunnyside Yards." ●

BOOMER TRAIL. Albert P. Hill, Elgin Hotel, 337 F St., San Diego 1, Calif., tells us that he has worked for 33 railroads in 33 years in more than 100 cities and that the late Bob Ripley embodied this information in his *Believe It or Not* cartoon in newspapers of June 21, 1947.

"I am personally acquainted with Jack McLarn, your fiction author's father," Mr. Hill writes. "He and I were both telegraphers on the Alabama Great Southern at Birmingham, Ala., my native state, shortly after the turn of the century. The AGS is famed for having used the first electric headlight on any locomotive in the South, having bought it from the Columbian Exposition at Chicago in 1893."

Another boomer, C. B. Gordon, 4451 Edgewood Place, Riverside, Calif., tells us that he has worked on 22 roads, beginning in 1898, as a steam locomotive fireman and later becoming an engineer. He also held jobs as tele-



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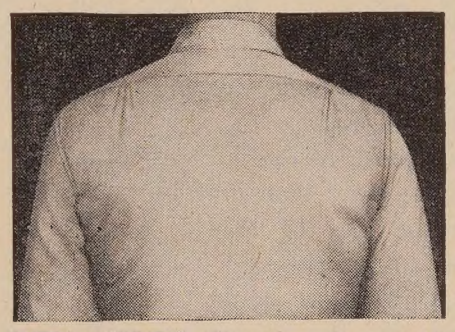

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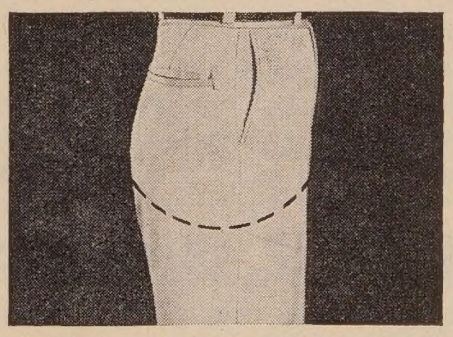
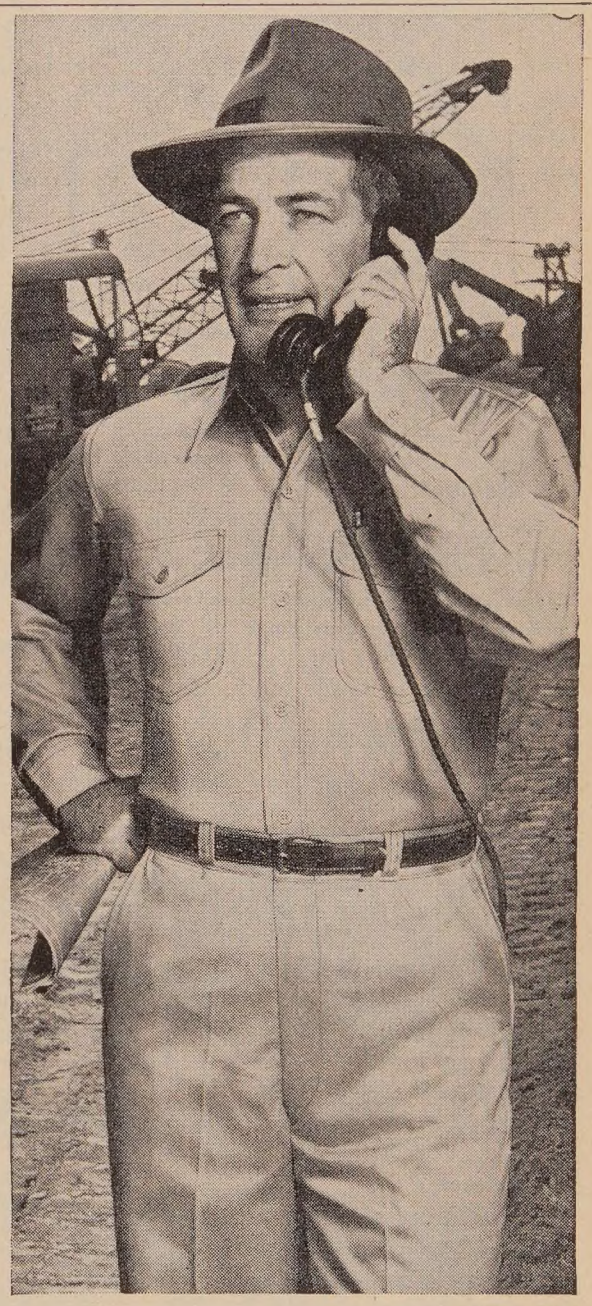


GREATER COMFORT. "U" shaped saddle crotch in Lee pants follows body curve, eliminates binding of ordinary pants.



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graph operator, train dispatcher and night chief dispatcher, "spending the major portion of my 52 years of railroading on the B&O's Pittsburgh Division, the Western Division of the old El Paso & Southwestern (merged with the SP in 1924), and the Union Pacific's Los Angeles Division."

He adds: "One of your top authors, 'Haywire Mac' McClintock, is back on radio, a San Francisco station, in a morning spot on Al Pearce's program. He still has a good voice and is a wizard with the banjo." ●

930 MILLION bushels of wheat, it is estimated, are being moved by rail this fall from America's grain belt into the great storage bins known as elevators. The crop is enough to fill almost half a million boxcars, or form a freight train 4000 miles long!

Playing a key role in wheat hauls is the Association of American Railroads, Car Service Division. The AAR annually takes action to get grain-carrying boxcars back to their home lines well in advance of the big harvest season. This gives the owner lines a chance to recondition those cars and to deploy them at strategic points in the wheat belt.

As a result of the railroad companies' spending more than nine billion dollars since the end of World War II for better equipment and facilities of all sorts, including some 550,000 new freight cars, the carriers are in the best physical condition in all their long history. Right now, as we said, they are moving mountains of golden grain from wheat fields to storage elevators, to flour mills, and thus eventually to the bakers, the grocers, and your own home. ●

MINNESOTA TRANSFER article by Frank Donovan in a recent issue opened the flood-gates of memory for Paul W. Tilley, retired Santa Fe mudhop, 10109 S. Stanford Ave., Los Angeles 2, Calif. As a result of reading this feature, Mr. Tilley took a special trip to the Twin Cities to revisit familiar old scenes and meet again some of the oldtimers he used to know "away back when."

"I went to work there as a truck pusher in the fall of 1919," he tells us, "at the Work House, or LCL transfer, upon returning home from World War I. My hours were 7:30 a.m. to 4:30 p.m., with a little overtime on Sundays. My job was to help get the loads switched to the other roads.

"After pushing a truck for a while, I became a caller of marks, a loader, and later a checker. It was strictly hand labor, with no special equipment for lifting heavy articles. I was interested in the daily turnover of personnel. In fact, I often had to wait my turn for a full gang. About 100 men worked on the platforms. A gang there usually consisted of a checker, a caller, and three or four others. Sometimes we handled as many as 200 cars a day at the LCL house.

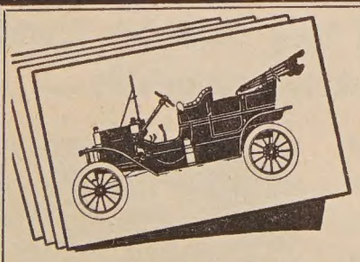
"Revisiting the Minnesota Transfer after a long absence, I arrived in the lunch hour, while the men were off duty. Yardmaster Arland (mentioned in Mr. Donovan's article) told me quite a bit about the changes that had taken place in recent years, and I met a few old friends." ●

PRR ROSTER of steam, diesel and electric motive power will be published in our December issue, out November 5. We are getting more requests for this roster than for any other. ●

VARIETY is the keynote of A. J. Franck, Box 62, Mineola, N. Y., who writes: "In my time I have had my fingers in some three dozen different transportation agencies—express, steam railroads, and electric railways. All three interest me, and I buy *Railroad Magazine* because it gives a reasonably balanced presentation of them all.

"Incidentally, I find nothing to lament in the passing of steam. The steam engine was an exciting spectacle, but also was filthy. I don't have to go into details on that score. The smoke pall that darkened the sky and showered soot over the countryside may have looked pretty to some people, but others of us are glad to see it disappear."

Many thousands of fans disagree with Mr. Franck. Among them is Hunt-



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ley MacLeod, Trenton, N. S., Canada, who writes: "I am pleased that your magazine continues to pay its respects to the vanishing steam locomotive. Although the diesel is invading Canada, the Canadian National's short line that serves our community is still blessed with the sound and smell of coal-burners. It is a joy to watch such sights as CNR Consolidation No. 2376 meeting a passenger 4-60, the 1164, here at Trenton. No. 2376 is one of a series that haul new freight cars and other manufactured steel items from the Eastern Car Co. for delivery to CNR or Canadian Pacific."

Another steam enthusiast, Neal R. Miller, Longmont, Colo., remarks: "We of the Rocky Mountain Railroad Club buy your magazine mainly because of its good steam articles and pictures. The Union Pacific is still running 800s, 3900s, and 4000s on Sherman Hill between Cheyenne and Laramie, with a few diesels mixed in. Steam continues to rule the hill. We go there often to take pictures, not knowing when the growlers will take over."

LAST steam operation on the Wabash, reports Kenneth De Sollar, 207 E. 7th St., Beardstown, Ill., is train No. 3 that runs on the 79-mile, freight-only, branch line between Bluffs, Ill., and Keokuk, Iowa.

Says he: "The locomotives are old f-4 Class 2-6-0s, which have kept on running year after year, during which time newer and more powerful hogs were sold because of the lightweight rail and the weight limitation on the Illinois River bridge at Meredosia, Ill. The first car in this train is a flatcar. It carries an old tender that serves as an auxiliary water supply, the water shortage at Mt. Sterling, Ill., having forced the closure of the tank there.

"It is interesting to note that on the first five miles of this line—between Meredosia and Bluffs—Illinois's first railroad track was laid. The veteran f-4s have to share this trackage with a new Wabash jeep that serves Meredosia's big electric-power plant. At Bluffs there are coaling facilities, yards, and a 3-stall roundhouse."

BIG GULCH, the California ghost town mentioned in a recent issue, is not the only place that has had four different names in its history.

"A community near me has had four names," writes Ross Moorehead, RFD 1, Box 216, Findlay, Ohio. "At present it is called North Findlay by the Nickel Plate Railroad and the Highway Department's signs. But long ago it was known as Silverwood. Confusion arose because another Ohio village also bore that name, so the town near my home was renamed Stuartsville, then Mortimer and finally North Findlay. The New York Central still clings to the old name Mortimer, because the Central already had a North Findlay station in the northern end of my home city."

"Perhaps no other road has had so many station changes per mile as the Long Island," according to Felix E. Reifschneider, Box 774, Orlando, Fla., and Bill Slade, Tabor, N.J. "Stations have been built, later abandoned, still later re-established, sometimes under different names, and then abandoned a second time. There is hardly a town on the island that has not changed its name at least once."

"DON'T turn *Railroad* into a picture gallery of faces," urges H. L. Kelso, Box 4846 Florence Br., Los Angeles 1, Calif. "I think your readers are much more interested in photos of locomotives, trains and equipment than photos of people. They'd rather see a good shot of a train blasting up a hill, for example, than an operator at a CTC board."

Mr. Kelso is probably right. All the same, the opinions expressed in our incoming mail lead us to believe that most readers *also* like to see a few human-interest shots sprinkled among the more technical prints of engines, trains, yards, signal towers, and so on.

We are still getting letters and cards complimenting Ben Cutler on the photo he made for our June cover. That photo, tinted, shows rear views of three girls waiting for a narrow-gage train that is puffing toward them. Typical of many readers' comments is this from Roy W. Howard, 3113 S. Center Ave., Arcadia, Calif.:

"If I know railroaders, even non-railroaders, especially the male contingent, I'll bet that every one of them who looked at the June cover said or thought, 'I wish those girls would turn around so I could see their faces.'"

DELLINGER'S return to *Railroad* has evoked much approval from our readers, among them being the Rev. John S. Williamson, St. Paul's Rectory, 100 Main St., Owego, N. Y. Although our clerical friend is sure that he likes Dellinger's fiction and Lathrop's true tales, he adds cautiously: "I reserve judgment on your new format. I miss something, but can't put my finger on it yet."

GRANITE RAILWAY, pictured in a recent issue, evokes fond memories for W. H. Kilpatrick, 5239 Loleta Ave., Los Angeles 41, Calif. Says he:

"I knew every foot of that line before I was through grammar school in 1891. In fact, I worked at hauling granite from West Quincy to Dorchester, Mass., every summer from '94 until I took up railroading as a full-time career in '97. Many years later I often rode over the Granite branch and I even worked as an extra freight brakeman on the so-called Quincy job a few times in 1905 and 1906.

"The Granite Railway was the first American rail line placed in operation. A few remnants of the original line may still be seen."

(Continued on page 62)

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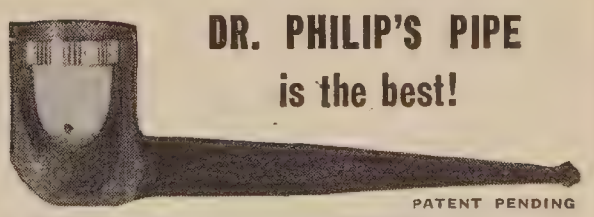

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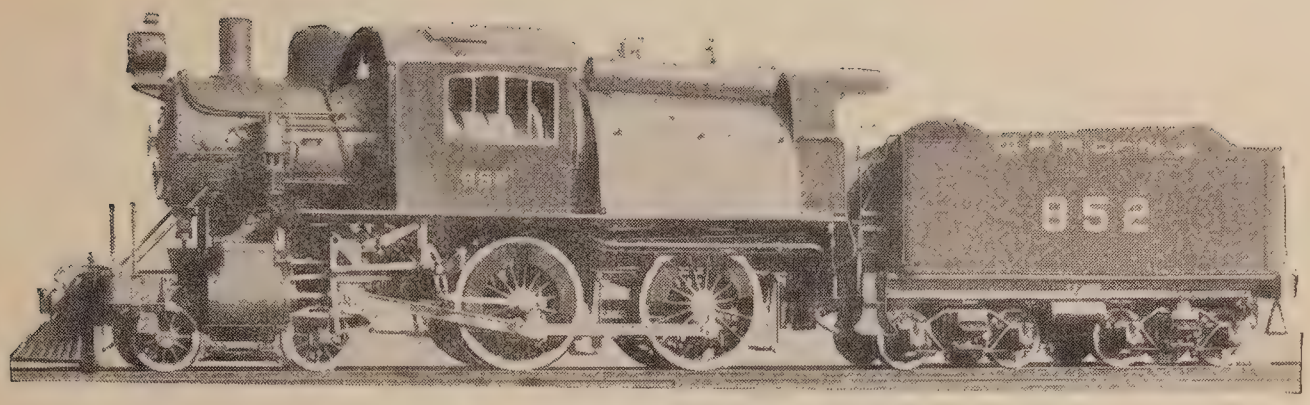
JERSEY CENTRAL CAMELBACK No. 751 takes on coal in the Jersey City yards for her final day of operation



THE CAMELBACKS' LAST ROUNDUP

by EJLER G. JAKOBSSON

With Eight Photographs by A. F. Sozio

THE MORNING was warm with spring promise. Engine 759 straddled a service pit in the misty yards of the Jersey Central Lines in Jersey City, with the yard crew swarming over her, smoothing out the kinks of her final run. She snorted, belched and rumbled, rusty and dusty, but noisily, deafeningly alive. Hell's proud fires were burning in her vitals, and her breath was hot and wheezy—you could tell at a glance that she did not know she was through.

Neither did the men who were servicing her for one last time. Her yard crew.

How about going in her, you said and the man said, "Okay, but you're gonna get dirty."

So you felt like getting dirty. You monkeyed up her face, feeling a little clumsy and maybe a touch irreverent, considering that what you were going to say about her was going to be her obituary—or at least one of them—and there she was, still alive under your touch, and still pounding a gusty tempo. You squeezed through the narrow door into her engineer's cab—and that's where you really got it.

Suddenly you knew why she was through. You didn't have to like it, but it was somehow fitting that she should go in the early springtime—April 23, 1954.

Engine 759 was one of the last seven Camelback locomotives to be in active service in the United States—all on the roster of the Jersey Central—and by the time you read this, all seven will have been retired. April 23rd had been officially announced as the last day of steam operation on the Central, and spotted here and there in the gray yards were the sisters and cousins of 759, all belching their last puffs of smoke and shuddering under their last heads of steam. Some of them still would make a run or two before the day was done, but there was no bunting, no excitement, no brass in evidence.

You sat in the small pull-out seat in the narrow slot of a cab pasted to the side of 759's pounding boiler, and the man was talking to you, explaining the exigencies of operating a Camelback locomotive. He was yelling at the top of his lungs and you couldn't hear him—you didn't have to.

The gadgets and the gages were all within reach, scattered on the belly of the boiler. You couldn't move without brushing against one of them. You almost felt like one of them yourself, but a curiously insignificant gadget, made merely of flesh and blood. And you thought of the men who had driven these things and of all you had ever heard of Camelbacks, and realized you were having a last look at something that meant more than the mere passing of an era in motive power. You were being given a glimpse of what you used to read about a long time ago—the struggle for supremacy between men and machines.

Today the struggle is over. This is the first time you've thought of a

After Using This Type of Power for More Than Half a Century, the Jersey Central Has Retired the Only Two-Cab Engines Left in the U. S.

Camelback in terms like these, and it's something of a discovery.

You've seen them, from time to time over the years, rocketing picturesquely through the countryside, stubby, busty, skirts flaring behind —"Mother Hubbards." But now you're sitting in the cab of one yourself, while the man is hollering instructions at you, and you feel like a tick in the steely skinfold of a muscular monster. You can't hear anything above the roaring power of her insides, and the rhythmic pounding carries its own suggestion —maybe you can guess why some of the boys pulled the throttle wide and let her eat steel.

There would have been little else to do. The space allotted to the engineer from cab wall to boiler side is no more than two feet wide. There are no distracting comforts—historically and otherwise, the Camelbacks were strictly functional. The leashed energy of the thing, so close to you that you're a part of it, vibrates right through you. And then there must have been the knowledge that if anything went wrong, it could go pretty damned badly wrong. There were stories you'd heard of driving rods breaking right under the engineer's feet and smashing right through the cab, of cabs being crushed in a sideswipe, though none of these had happened within recent years.

But you could see why some of the guys hauled her throttle wide. That was what she was for.

After a while this jells with you and you holler back at the man beside you, "Who the hell did they ever get to run these things?" and he grins at you.

"Let's go down and I'll show you."

And that's how you meet Harry Freund.

SEPARATE CABS for engineer and fireman made Camelback distinctive. Runway alongside boiler was only link between 751's engineer, David J. Calahan, and her fireman, Robert J. Kirner, Jr. Firemen were usually too busy to make the perilous trip up front along the moving engine.

HE'S BEEN with the Central since 1912, and is retiring today, after forty years, all told, in railroading, going out this evening, with the last run of steam. He's a greying, wiry man with weather-sharp, light-colored eyes, a ruddy, smiling face, and today he stands a little taller than his medium height. He's saying good-by to a lot of things, including Camelbacks, having been the engineer on just about all of them. He tells you the Jersey's current Camelbacks were built by Baldwin from 1910-1914.

Speaking softly, giving you plenty of time, he goes over the stuff. He started with the Central, firing inspection Engine 999 for two years—this was the official engine of the road for hauling top brass around. His engineer's name was James Doud. Then he was traveling instructor fireman.

The first run he made at the throttle was with Camelback 622, on Christmas Eve in 1924, after it had almost got him killed.

Robert P. Morris

WITH FULL HEAD of steam, Camelback No. 770 highballed along Jersey Central tracks.

He was still a traveling instructor fireman then, and was deadheading home to Jersey City, riding the head end of the first car behind the sizzling, swaying skirts of 622, highballing through the snowy night. The night meant, perhaps, a little more to Harry than it did to most people—it was not only Christmas Eve, but also the eve of his birthday. He was thinking of these things when he became aware of something striking the side of the train sharply. The sound jerked him alert, made him uneasy without his quite knowing why. The train continued on; hauling open the window and leaning out, he could just barely see 622 waggling her Mother Hubbard skirts just ahead. He knew her engineer, Jim "Cocky" Hill, and Jim's hand on the throttle seemed

LINE-UP. No. 763 edges away from coal chute as fuel begins to tumble into 830's tender. Behind, still another Camelback waits in line.

to put a reassuring, familiar cockiness to those hightailing skirts. Cocky liked to make her go.

Not fully reassured, however, Harry closed the window and made a mental note of the spot where the collision had occurred. He had become aware of the impact at Singer's Tower—some distance ahead the tracks crossed a drawbridge, and if anything was wrong, this is where it might show. Only it could be too late to do anything about it then.

Just before they hit the drawbridge, the brakes suddenly went into emergency.

"I opened the window to look out again, and saw the tail end of another train directly ahead. She was waiting at the drawbridge, and we'd stopped about a half a car length from her. I got out and went over to our engine, saw the fireman tugging at the engineer's cab door, yelling, 'Open the door, Jim—what is the matter with you?'

"I opened the cab window, reached in and unlocked the cab door. Cocky Hill was lying unconscious on the floor—a projection on some freight car we'd passed on a siding at Singer's Tower had torn loose, hurtled in through the partly open window, and crowned Jim.

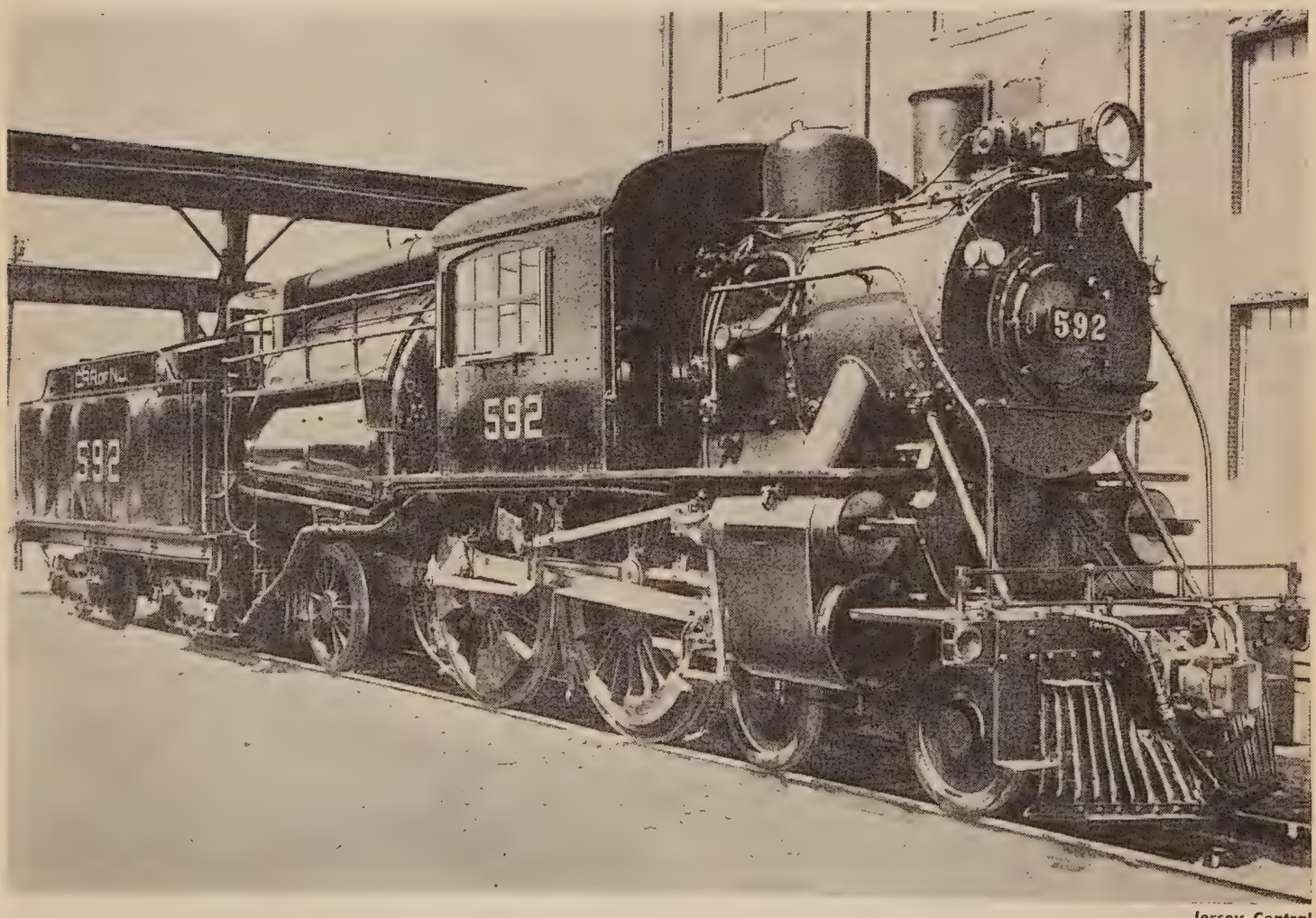
"I went in, hauled Jim up, and when I pulled his cap off, blood streamed down his face. He never had a chance to duck.

"I took over the engine. We made a special stop at the West Eighth Street station in Bayonne and got an ambulance for Jim. Then I ran the train to Jersey City, thinking pretty hard about it all the way. When we got there, I asked the fireman, 'What the hell made you brake the train?'

"He said he noticed the train going through a red signal, guessed something was wrong, so he twisted the emergency cock. And that was the only thing that saved us. Jim put in some time in a hospital, but came out okay."

THE STORY becomes remarkable when you realize that the fireman on the Camelback rode totally blind, and when you think of the engineer's helplessness in the narrow confines of the cab. Although the left hand cab in mid-boiler was originally conceived as the fireman's shelter and there's a runway from it to his platform back of the boiler, the tallowpot's job never permitted him to use it. He rode back of the Mother Hubbard skirts, feeding her fires, with the cab effectively blocking any possible view of the tracks ahead—and without any possibility of communicating with the engineer. There is an emergency cock behind the boiler to enable him to apply brakes to stop the train—that's all.

Although, occasionally, a brakeman might ride the left-hand cab, a Camelback-powered train was the



Jersey Central

PRIDE AND GLORY of the CNJ camel corps was No. 592, holder of unofficial steam record, 120 mph. Baltimore & Ohio museum at Baltimore, Md., has become her last roundhouse.

engineer's baby and his alone. He was responsible for her safety—he was its eyes, ears and brain. Glued to his bouncing perch, clinging to the controls like nerve ends protruding from her side, he was her sole master and directing genius—provided nothing tried to crowd into the cab with him. If it did, there was "no chance to duck."

Among the many engines Harry has operated since then, there were many Camelbacks. You mention to him the crowded quarters, the potential perils to life and limb arising from the location of the cab (perils which once made the ICC outlaw any further construction of Camelbacks), and he gets that light in his eyes.

"But those babies made time . . ." Then he tells you the Jersey's pride and joy in its Camelback corps. Number 592, out of service since 1949, was restored this spring to her pristine glory and placed into the Baltimore & Ohio museum in Baltimore as a permanent exhibit. According to unofficial records, Number 592 still holds the steam speed mark of 120 miles per hour. She established it years ago on the "racetrack," a stretch of straight, heavy track between Winslow Junction and Atlantic City, where, Harry tells you, engines once were brought from all over the country for test runs.

Engineer Wesley Alpugh of Atlantic City made the record run, and it was later equaled by Engineers John Tomers and John Waite, also of Atlantic City. Number 592 was a high-wheeler and, Harry says proudly, "Nobody ever opened the throttle all the way on her, either . . ."

Nobody tries to sell you on the idea that, to the men who had to run them, the passing of the Camelbacks is not at least a moderate blessing. But, Harry tells you with a grin, the same couldn't be said of a fishhawk that used to ride the smoke of one of these engines on its morning run from Redbank to Barnegat. The reason for the bird's passion for this particular run nobody ever fathomed, but if the train was late to Redbank it used to hang around the depot, waiting for her, then make a dive into the smoke issuing from her stack. Originally white, "it used to fly right in the smoke from the stack all the way to Barnegat—and that's probably the only coal-black fishhawk anybody ever saw!"

Harry's forty years of railroading were accident free—a perfect record—though once, when highballing along at seventy, he ran over a dog somebody had tied to the railroad tracks. "Would you believe it?"

WATER STOP. Tender waits under spout as Hostler Michaels, tanks up for the run.

Harry asks with a grin that still shows his relief. "When I looked back, that pup was doing some highballing of his own, yipping and heading for tall timber. He wasn't hurt a bit—that Camelback's wheels just cut his rope. Now who'd do a thing like that to a dog?"

You gab a little longer with Harry, who's looking forward to a future of "just fishing" in the Adirondacks, and not too happily. He's leaving behind him all he ever knew—in a very real sense, the man who introduced you to him points out. "If you say anything at all about Harry, get this into your piece—there're eighty-five guys on the road Harry trained from firemen to become engineers, all on his own time. And not one of 'em had to take a repeat on his exam—they all passed on the first bounce."

"Just fishing" is something Harry's going to have to learn about.

THE MAN'S NAME is Gus Fertakos, and he's the master mechanic at the Central Jersey City yards. A quiet, easy guy, with an unobtrusive air of authority. The men all say that nothing ever happens on the line because Gus has any trouble well in hand before it comes about. The yards tick around him smoothly, without excitement or effort. There's a real regret in his voice when he talks about the departure of men like Harry—but none when he tells of the Camelbacks' going.

"We've had a good record with them, but that's mostly because of the men. Like the fireman Harry told you about—and Harry himself. And there was a time when the roads couldn't have got along without the Camelbacks . . . but you can see why we feel it's important that men like Harry pass their knowledge and experience along to others. Sitting in that tight little cab a man got to thinking along the right lines. He assumed total responsibility.

"Those other things, sideswipes, an engine turning over—the possibility was always there. We never had a driving rod under a man, but"—he looks at you somberly—"we've found 'em cracked during inspection. You had to be on your toes."

The Camelback's unorthodox design, primarily the result of natural evolution, was an offspring of the mating of 19th century necessity with invention. As far back as 1830 Peter Cooper's experimental *Tom Thumb* locomotive, designed to sell the idea of steam to America's oldest railroad, the B&O, was predicated on the consumption of hard, lumpy anthracite from the Pennsyl-

vania coal fields. This coal burned with difficulty, and Cooper tried to solve the draft problem with a small fan, motivated from one of the axles by means of a belt. The slipping of the belt, however, was a continual hazard, and when, on one occasion, it caused the *Tom Thumb* to lose a prearranged race to a horse, it was deemed impractical.

Locomotive designers then shifted their efforts to building engines with larger fire grate areas, and in 1839 Eastwick & Harrison delivered a locomotive to the Philadelphia & Reading with the then unprecedented grate area of ten square feet. This engine hauled forty times its own weight and inspired "an orgy of design" which, among other things, produced the *Nichols Novelty*—a two-unit locomotive having for its trailing member a horizontal boiler mounted on two tender trucks and boasting thirty-six square feet of grate area.

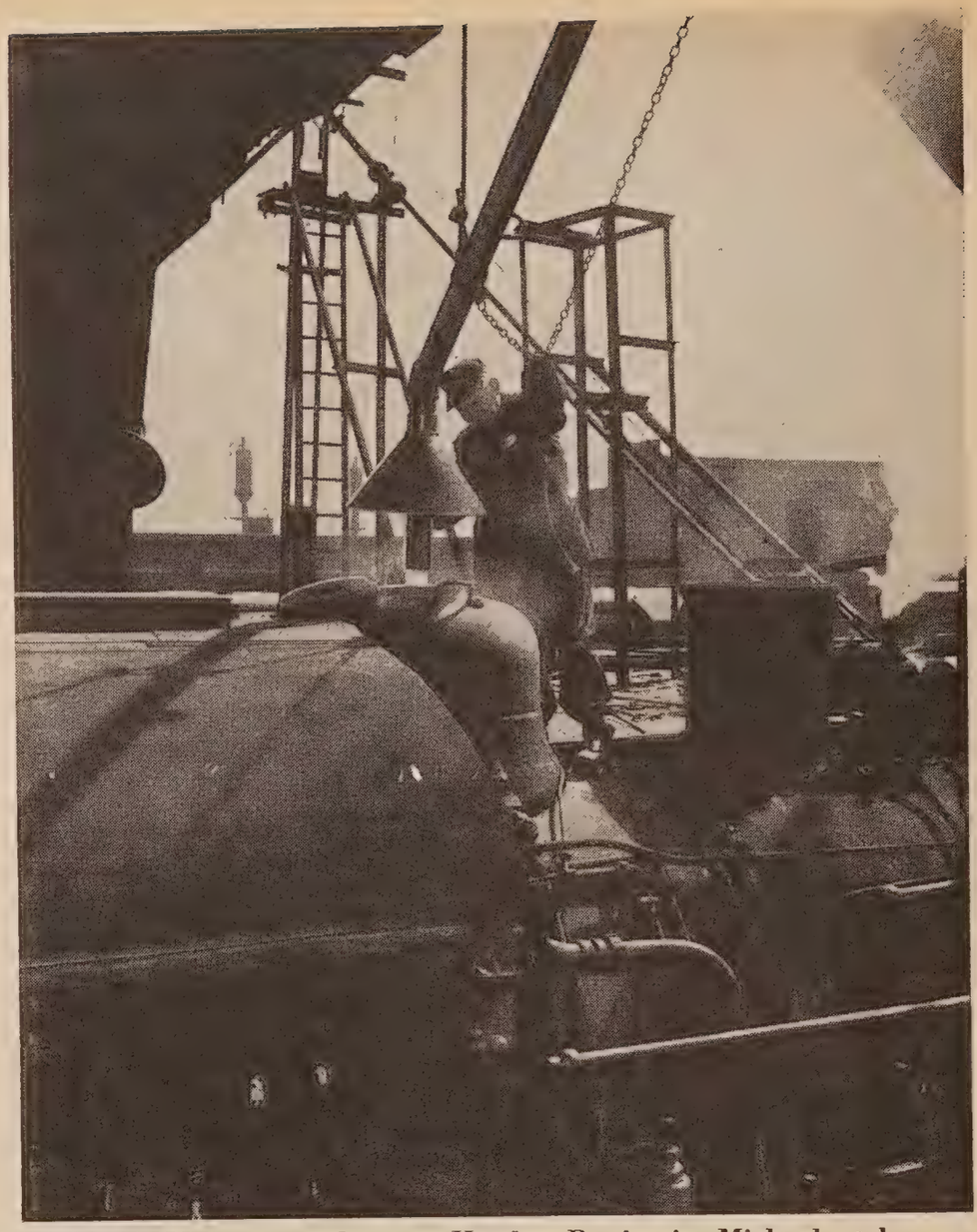
The first engine to be named a "Camel" was designed by the B&O's Ross Winans and burned soft coal. She had a long, narrow firebox extending well beyond the rear set of driving wheels. To keep down engine length, the cab was placed *atop* the boiler, just behind the stack. Reading's James Milholland modified this engine by widening the firebox to extend five inches beyond the rails on each side—and this design was the immediate forefather of the Camelbacks as we have known them today.

In 1887 John E. Wootten, general manager of the Reading, patented an engine with a broad, shallow firebox for burning waste anthracite, placed above the driving wheels. In the following year he sent to the Paris Exposition a ten-wheeler featuring this design (Engine Number 408), and carrying the conventional cab on top of the firebox. The engine was sharply criticized abroad, and when Wootten, with total faith in his brainchild, arranged for a demonstration run, it was discovered that European road clearances would not permit the perching of the cab atop the firebox.

Wootten, with simple genius, moved the cab forward, allowed it to *straddle* the boiler midway so that the boiler ran through the cab and divided it into two compartments.

When the tests were held, the 408 performed successfully. Objections to it, however, continued abroad, the British particularly attacking this engine, not on performance but on design. The Camelback never did become popular in England.

Brought back to this country, Number 408, a 4-6-0, was so successful on the Reading that her wheel arrangement became for years the road's favorite. And so popular did the Camelback design become that no less than fifty roads in the U. S. and Mexico used them, including the major lines.



SAND DOME spurts dust as Hostler Benjamin Michaels takes on enough "seashore" to keep the 751 supplied on her last run.

The affectionate "Mother Hubbard" appellation is said to have originated with the B&O, which wished to make a distinction between the Wootten engine and the original Ross Winans Camel engine. The term "Camelback," has survived, in general application, to designate both.

The Jersey Central's last seven Camelbacks were all 4-6-0's, were all built between 1910 and 1914, and all had the same specifications: weight 377,400 pounds; tractive effort, 38,318 pounds; boiler pressure 210; firebox 122 by 108¼ inches; grate area 91.8 square feet.

In their heyday, Camelbacks ranged from the 0-4-0 types to 0-8-8-0 Mallets.

When the first Camelbacks were built, boiler circumferences were

CLOSE-UP OF MICHAELS filling the old Camelback's sand dome in the Jersey Central yards at Jersey City. Here, the job is nearly done.

smaller than they are now, and consequently the cabs were less crowded. As engines were made bigger, the human element got squeezed in.

Gus Fertakos, you feel, does not approve.

The Camelbacks which stayed in action until April 23, 1954, were numbered 758, 759, 763, 769, 773, 752 and 774. A year ago there were forty-seven.

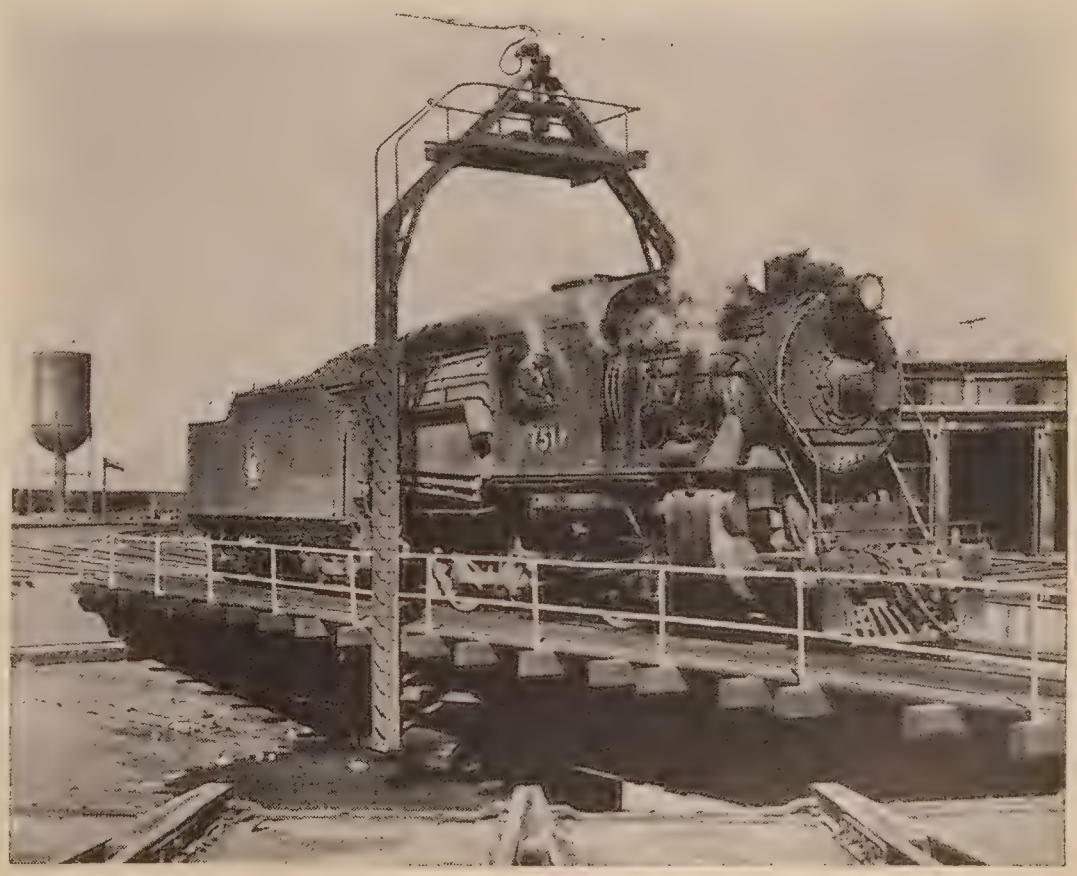
By the time you read these words, just about the only place in the world where you'll be able to see a Camelback is Bailey's Roundhouse —the B&O museum where various specimens of outmoded equipment are preserved for future generations to gape at, and on rare occasions are trotted out for fairs and centennials. A lot of the Jersey Central's "color" went out with the famous old Camelbacks.

Despite the fact that one diesel is supposed to be able to replace from two to three steam power units, primarily because they demand less service time, Gus feels that in time diesels will have to replace steam, unit for unit on the Jersey Central. That's the plan, anyhow. Some engines will be stored and held in readiness for possible wartime emergencies, but the Camelbacks do not figure in these plans. Gus likes diesels for economy, power, availability—but mostly, you sense, because he knows that they give a break to the men.

This can't come too quickly for Gus. The road had several Camelback runs still scheduled for the day, but you leave him frowning over his timetables, figuring hard how he can meet the day's exigencies without using any of them.

As you leave, he says with a sigh, "I guess I'm going to have to use at least one more—"

After that old Mother Hubbard went to the cupboard—and found it was bare. ●



'ROUND AND 'ROUND SHE GOES. On April 23rd this turntable shunted its last Camelback. All CNJ two-cab engines, except 592, are destined for scrap heap.

The Peanut Butcher

It Was Tedious Work, Hawking Candy, Soda, Popcorn, and the Like on Oldtime Southern Pacific Cars, but We Still Found Time Now and Then for a Pretty Girl

TRUE TALE by LEO L. STANLEY

A HALF CENTURY has shown its red tail light since I first walked through those dusty, smoky, jolting, rattling, oldtime Southern Pacific cars calling out, "Peanuts, popcorn, candy, and chewing gum . . . Oranges, apples, and bananas . . . Soda water, sarsaparilla, and ginger ale . . . The morning papers and all the late magazines."

This was in 1904 when, after only a year, I was forced to leave Stanford University for lack of funds. Bill Tingley, a friend of mine, had told me the Dennison News Company, which held the vending concessions on all the western railroads, needed a peanut butcher, and I applied. I saw a man named Burnham at the company's San Francisco office and got the job.

I'd begin, Mr. Burnham told me, by making a few trips with one of the older men to learn how it was done. Usually peanut butchers started by "working the locals," and, as their proficiency increased, advanced to the *Overlands,* the *Shore Line Limiteds,* and other through trains where business was better. A month or two on the locals was generally enough to train a beginner so that he could sell his merchandise with a good profit.

I made my first trip with a man named Long. He had been on the road as a news butcher for many years, and he knew how to handle the public. When I came aboard, he was glad to show me the tricks of the trade.

"It takes a little brain work to do this job," he told me. "The thing is to do some little favor for the passengers so that they become obligated to you. When you're going through the train with a basket of fruit and a drummer wants a paper, lay down your basket and go up to the smoker and get him one. You don't have to do this, but the drummer'll see you want to please him, and next time you come around he'll buy a magazine, or maybe come up to the smoker for a cigar. He might even tip you."

"You have to please the kids too," he went on. "After we leave San Jose at ten o'clock, wash your hands and then break up two or three packages of that popcorn cracker-jack in a cardboard box and go through the cars and hand out a little to the women and children. The kids'll be strong for it. Then, on your next trip through, bring a basket of cracker-jack, and you can sell it at one for ten, or two for fifteen. In that way, you get your twenty percent commission, and an extra nickel too. You're charged only a nickel for them."

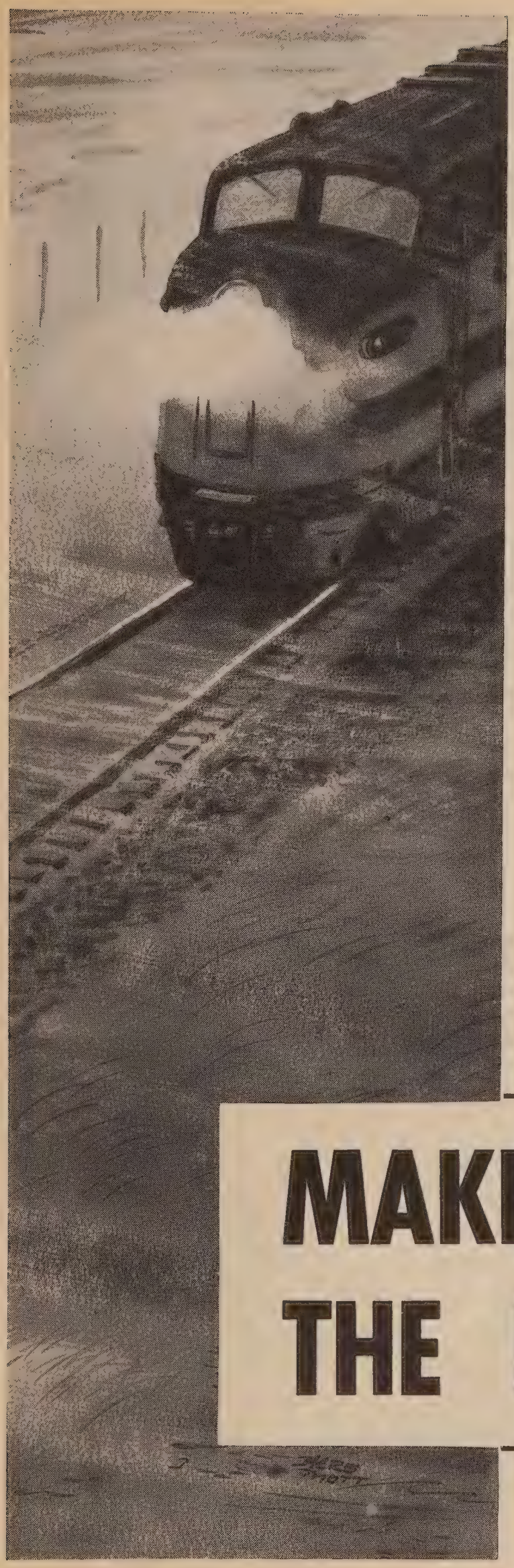
Even so, you had to be on the go most of the time to make any real money at all. It was hard work. During a 450-mile day-time run between San Francisco and Los Angeles, a newsboy probably walked over thirty miles. And when every step was along a swaying aisle, he really got a workout. Those old cars had no vestibules, and when you went from one to the other with your left arm loaded with a stack of magazines, books, or a basket of fruit or candy, you had not only the lurching of the train to contend with, but also cinders, smoke, and the downward draft of the wind.

But I liked the job, and before long, when a peanut butcher on the San Luis Obispo Local was transferred, I took his place. The Local was considered a stepping-stone to the *Coaster,* the *Overland,* or the *Sunset Limited.* It served a stretch of Southern Pacific coast line south of San Francisco. All along its 250-mile route, a gathering of horse-drawn buggies, express carts, and drays would meet us at the station to take care of baggage and passengers and to catch up on the latest news of what was happening farther along the line. It was a two-day trip to San Luis and back, followed by a one-day layover.

WHEN we made a trip, we had to be at the depot at least a half hour before departure time to get everything ready in the front seats of the smoking car. An old colored man named Jones got our stuff aboard for us—the heavy wooden trunk, the daily papers, the icebox, the carrying baskets, and the fruit.

The books, magazines, candies, cigarettes, cigars, and other small packaged goods had to be taken out

(Continued on page 66)



The Headlight Was Only a White Blur, Stabbing Rapidly into a Solid Wall of Blackness and Flying Sand

MAKE WAY FOR THE EASTBOUND

by CHARLES W. TYLER

One-time fireman on the Boston & Maine

OLD DAN CASS had been handling steam power on the Midland for about forty-five years, more years than he cared to think of, and was slowing down. Each day he seemed to find it a little harder to make those split-second decisions that keep a train rolling. More and more he required help from his fireman, Fred McNelly, to hold the *Prairie Belle* "on the advertised."

Fred was never too busy watching the automatic stoker of the Northern-type 3285 to give such help. Fred was dependable. His presence fortified the white-haired engineer. Dan felt safe in the realization that a younger man was checking his train orders and signals. If it hadn't been for Fred McNelly—well, the hogger didn't like to guess what might have happened to the *Prairie Belle* in a sandstorm, for example.

Then one day Fred was set up running freight. On that very day,

a cloudy October afternoon, a sawed-off kid named Pete Kovac climbed into the cab of the 3285 with a self-conscious grin.

Old Dan's steel-gray eyes under white bushy brows bit hunks out of him. Why, Pete didn't look grown-up enough to need a safety razor! The engineer uttered a bear-growl as an indication that the runt's first trip on this high-wheeling passenger run was going to be tough.

DAN HAD HEARD some talk about the new fireman. Pete came from Shanty Town on the edge of the big city. "Pop" Kovak, who worked as a fire-cleaner on the roundhouse pits, had sired more brats than he could decently support, and Pete, being a runt and a "furriner," was pushed around a lot. Dan Cass had often seen the Shanty Town kids fight for lumps of coal alongside the track, each youngster lugging a dirty gunny-sack into which he tossed his loot.

Store toys were a luxury denied the Kovacs, so Pete played with real locomotives and real cars. He would scramble on, under, and over the freights, waiting on the third iron for the signal that led them into the yard. It was almost a miracle he wasn't run over. Night times, the snorting engines and their steam whistles played a lullaby that crooned him to sleep, while the rickety, trackside, frame house he lived in shook under the tramp of iron hoofs on the rail.

Black smoke pouring from the stubby stacks of the Consolidations, Mikes, Northern types, and switchers spread its smudge over Shanty Town, griming the freshly washed laundry that was hung out on the clothes lines. Faded housewives complained of the coal-smoke nuisance, but Pete Kovac breathed this smoke into his very soul. He loved the sounds and smells of the roaring road. Boxcars clanking beside his home provided his first geography lessons—cars of the Canadian Pacific, the Duluth, Missabe & Northern, the Rio Grande, the Algoma Central & Hudson Bay, and scores of other far-away pikes, each with its own peculiar emblem.

Pete soon learned what the signals on the gantry said to the engine crews, and in no time at all he caught onto the whistle calls. He could tell you when they were screaming for a grade crossing, whistling out a flagman or calling him back, or asking the tower to give them the board. He knew also that white flags astride the smokebox meant that a train was an extra, while green indicated a section following.

He never used the word caboose. Always it was the "crummy," the "hack" or the "buggy." Pete would squat on the hard, shining, steel rails up around the curve and chin with the flagman. His talk was old-fashioned, like a lady's whalebone corsets, but all the time he kept learning, and his devotion to the rails was unmistakable. Now and then he'd climb into the high cabs of grimy freight hogs as they stood puffing beside Shanty Town. Bold as a barmaid he was, and as full of chatter.

On his seventeenth birthday Pete got a job wiping engines. As any roundhouse man will tell you, wiping engines is laborious, dirty work. But Pete enjoyed it. He was now a railroader, a member of the inner circle. During his noon hours the runt would sit on the engineer's box of a big locomotive, fondling the levers, leaning across the arm-rest, and making believe he was on the open road with the great driving wheels whirling beneath him.

It wasn't many months before Pete grabbed at a chance to go firing. He passed the tests, made his student trips, and went on to the freight pool. The Shanty Town kid had come a long way from his coal-picking days. Cramming railroad lore into his head had paid off. He continued to study.

Everything that had to do with motive power was grist for Pete's mill. He questioned all the engineers and firemen who were willing to talk. He learned about combustion, firebox temperatures, and feedwater heaters. He delved into train orders and timecards. He discovered why one train was superior to another by right, class, or direction. And when he reached nineteen, taking advantage of a flu epidemic in Midland territory, the runt managed to get a crack at firing Number 10, the *Prairie Belle* for Old Man Cass.

Ten was an all-Pullman "lace-curtains" job pulled by a 4-8-4. Pete's heart pounded with joy when the call boy casually told him to go out on this train. His hand shook a trifle as he signed the black book. Stepping on air, he strode toward the roundhouse and remembered how often he had gazed up wistfully from the windows of his Shanty Town home at the lords of the passenger engine cabs. Especially those on the *Prairie Belle* and the *Moonbeam*.

NUMBER 3285 chugged onto the roundhouse lead. Her hostler swung off backward, turned around, and grinned at Pete. "Hiya, kid!"

"She all set?" the runt asked, swelling with pride.

"Right as rain, boy! Why, you firin' her?"

Pete nodded. "Nobody else."

Engineer Cass was emerging from the locker room. The hostler glanced that way and said to Pete: "The old man's gonna be lost without Fred McNelly. They been runnin' together a long time."

Pete, engrossed with his own thoughts, wasn't paying much attention. His shrewd brown eyes slid over the mountain of steel standing there. Those 3200 Class engines were a lot of motive power—two hundred and fifty tons of dynamite built to the precision of a Gruen watch.

"Just play it cozy, kid," the hostler advised, "and don't let Mr. Cass get in your hair!"

"What do you mean?"

The hostler lit a king-size cigarette and squinted toward the veteran hogger, who was trudging across the yard tracks. "You fired passenger before?"

"Nope."

"Well, watch yer step, tallowpot, or the old guy will turn you in."

This remark disturbed Pete. He

(Continued on page 73)

PHOTOS of the MONTH

28 BELOW ZERO in Soo Line's Rhinelander, Wis., yards, snapped by Norman Ehlke in 1912.

Chicago & North Western Railway

SLEEPING OUT ETERNITY at Boone, Iowa, but not forgotten, Kate Shelley came into the news again last July 6 when the Order of Railway Conductors erected a bronze marker on her grave. That was the 75th anniversary of her shining hour. As a girl of 15, Kate saw a Chicago & North Western bridge collapse in a cloudburst and flood, hurling an engine and crew into deep water. She crossed another shaky bridge, with storm raging, saved a fast passenger train, and became America's top rail heroine. After she grew up, Kate (with umbrella) served as station agent for the C & NW at Moingona, Iowa, until her death in 1912.

GREAT NORTHERN'S *Empire Builder*, now 25 years old, is shown near Delano, Minn., in 1929 and as it looks today with diesel power, beside Flatland River on boundary of Glacier National Park, Montana.

A. F. Sozio

WAITING for the 5:18 and the greatest guy in the world.

H. Sullivan

PULLED by 3726 and 3749, Santa Fe's *Grand Canyon Limited* (now dieselized) blasted through Cajon Pass.

St. Louis-San Francisco Railway

A SIGHT YOU'LL NEVER SEE AGAIN on the now-dieselized Frisco: steam engine No. 4500 glistening on a rainy night at Springfield, Mo., station.

James Purdie

CHARLES BINDA, towerman at Finch, Ont., where Canadian Pacific tracks cross New York Central, faces camera for Canadian National Film Board movie, "The Station Agent."

HIGHBALLING southward along the Hudson, the New York Central's *Pacemaker*, a luxurious, overnight, Chicago-New York, coach train, passes its northbound running mate.

"SHE'LL BE COMING 'ROUND THE MOUNTAIN WHEN SHE COMES." Harvey Uecker took this panoramic view near Garcia, Wash., 12 years ago. It shows Milwaukee Road engines 3012, an

Milwaukee Road

Atlantic type, and 2309, a Pacific, doubleheading *The Olympian* at reduced speed on a snow-covered S-curve across Hill Creek Bridge. We think it is one of the grandest steam shots of all time.

RAILROADING

SILVER STREAK. Streamliner flashes across 918-foot bridge above spectacular Hurricane Gulch.

Wide World

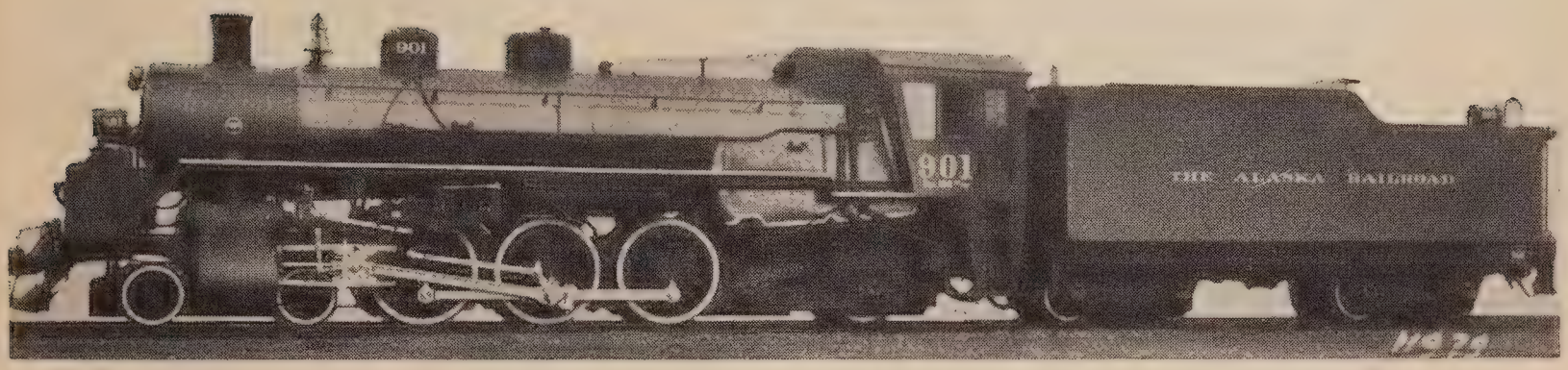
EASY DOES IT! Giant crane lowers 85-ton diesel onto her trucks at Whittier, Alaska, after sea voyage from Seattle in early days of the modernization program. ARR is now almost wholly dieselized.

IN ALASKA

Mountains Creep over the Roadbed, Wind Whips Up Thirty-Foot Snowdrifts, and Moose on the Track Slow the Trains, but the Men Still Say It's a Great Way to Spend a Lifetime

BY HAROLD COOK

With Photographs from the Alaska Railroad



OUT OF SERVICE. Heavy wartime duty wore out this Baldwin Pacific.

FROM THE WARM waters of the Japanese current, northward into the very shadow of the Arctic Circle, runs the Alaska Railroad, one of the northernmost rail lines in the world.

Run by the Department of the Interior under the management of Frank E. Kalbaugh, it is the only common carrier owned and operated by the United States Government. Only a government would own it. Any private company would have abandoned such a route years ago and converted to dog sled. Twenty years ago, cynics were saying that a dog sled was faster. But today, after a forty-year struggle with some of the most rugged conditions to be found anywhere, the Alaska Railroad seems at last on the verge of success.

The movement to grant statehood to the Territory of Alaska, which Congress has shelved at least temporarily, may have had something to do with the recent stepping up of the railroad.

Once a boomer's paradise, the road of late has turned respectable. Gone are the days of low pay and poor working conditions. With appropriate adjustments for the higher cost of frontier living, wages equal those in the States—the average for ARR's nearly 300 employes is $5500 a year—and, despite the rugged climate and terrain, working conditions are the best in history.

Its 500 miles of standard-gage track link the rich hinterland of Fairbanks and the Yukon with the sea.

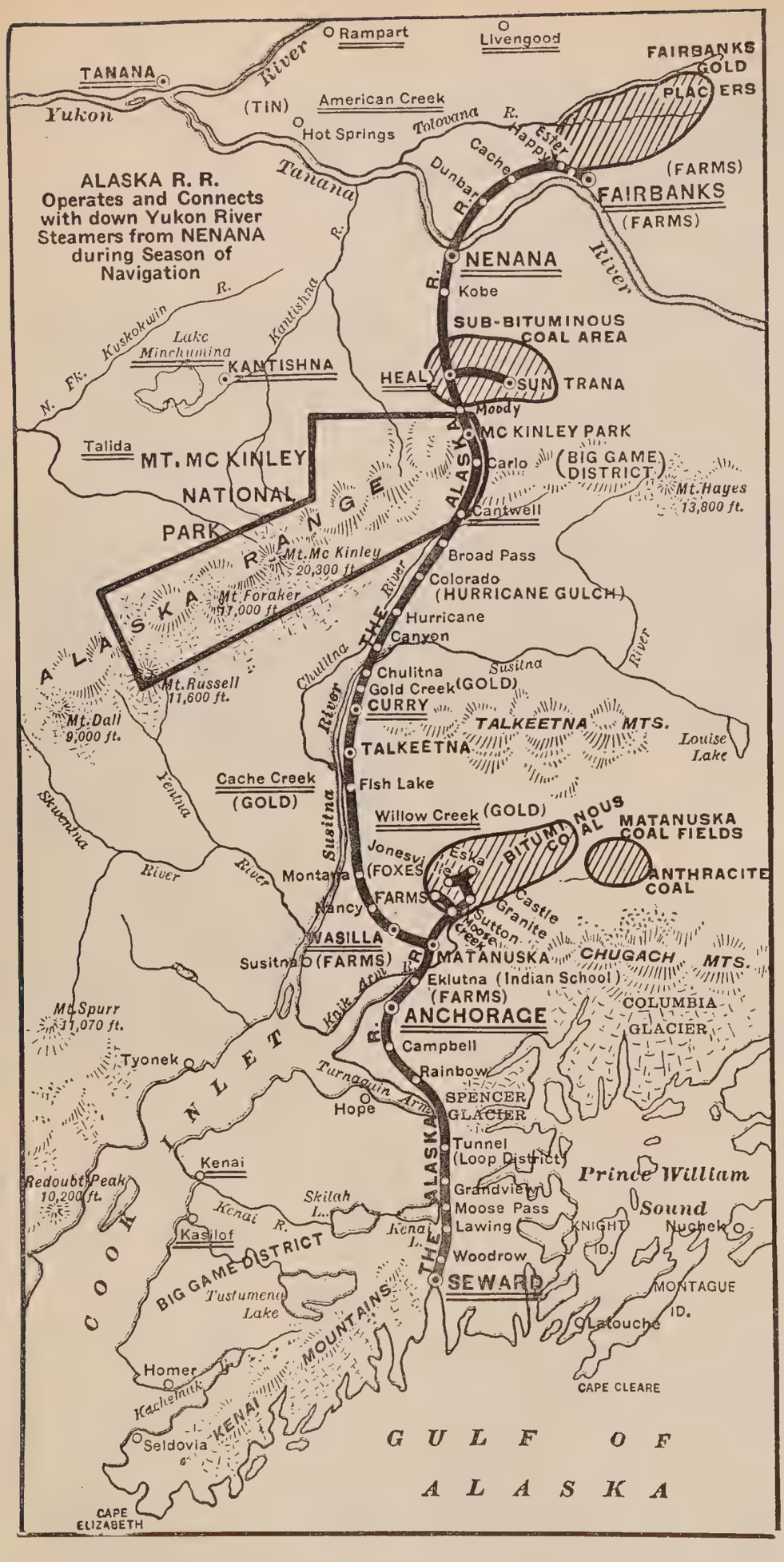
At its southern terminus is Seward on Resurrection Bay, the territory's finest warm-water port, with a climate roughly equivalent to Boston's.

But beyond Seward, along the sixty-two mile route to Portage, lies some difficult terrain. Here the line wanders through a desolate wilderness of glaciers and mountains, torrential streams, rivers, and waterfalls, beneath towering peaks that confine the road to a narrow valley.

In winter, it is a morass of snow, ice, and slush. The wind swoops down without warning from the Arctic wastes at a hundred miles an hour, bearing sleet, snow, and loose rock. Snow piles up over the track to depths of ten to twenty feet, and then the wind raises drifts more than thirty feet high.

Extreme cold makes oil sluggish and clogs the equipment; it makes steel and iron brittle. Trains are stalled, telephone and telegraph lines are snapped, avalanches bury the track, and traffic comes to a standstill as snow-removal equipment slams doggedly into the rock-hard drifts.

Winter service between Seward and Portage is so undependable that during World War II the Army ramrodded a twelve-mile cutoff to Whittier, a warm-water port on a bay large enough to hold the entire U. S. Navy. Beyond Portage the main line creeps along the deep gorge of Turnagain Arm toward



NORTH TO FROZEN TUNDRAS runs ARR's 500-mile route. The cut-off between Whittier and Portage, built since map was made, links a bay on Prince William Sound with Turnagain Arm. Cross-hatching indicates coal and mineral deposits.

Anchorage, the territory's largest city and the headquarters of the railroad. The port, on Cook Inlet, freezes in winter so that the cutoff to Whittier is sometimes inland Alaska's only transportation link with the outside world.

Beyond Anchorage the railroad travels into the famed Matanuska Valley, which during the thirties sounded to a lot of people like the Promised Land. It isn't that, but it does have prosperous dairy farms and it grows strawberries the size of plums and cabbages as big as watermelons.

A hundred miles or so beyond Matanuska, a barrier of jagged foothills crammed with glaciers and crevasses stands guard before Mt. McKinley, highest mountain in the western hemisphere, rising abruptly 17,000 feet above a plateau 3000 feet high.

The ARR passes McKinley at Curry, forty-six miles away, where —in the great days of steam—locomotives used to warm the hotel swimming pool for passengers eager for a swim. A few miles farther on, at Summit, the road reaches its highest altitude, 2363 feet above sea level.

Here begin the gold fields, writ large in history by the fabulous Yukon strike of 1896, but coal also is plentiful, and from the train you can see the dark veins in the hills near Healy. Still further on, beyond the Alaska Range, stretch the vast frozen tundras of the Arctic Circle —that bleak, treeless land of permafrost, muskeg, and the Arctic deer, where for a brief two or three months of the year, under the weird glare of the midnight sun, a million flowers burgeon forth across the interminable Arctic plain. Frozen hundreds of feet deep, only the surface of the tundra thaws, even in summer, and the land buckles and crumbles and slides while the railroad shimmies over its soggy roadbed like a rhumba dancer.

Yet Alaska is not merely a land of ice and snow. Six months of the year its climate is mild and pleasant. Nenana, where each spring a $140,000 jackpot goes to whoever

RECORD-BREAKER. Passenger streamliner, *AuRoRa,* whose name contains Alaska Railroad initials, waits beside the line's first saddle-tank engine on exhibition at Fairbanks. Diesels have cut old two-day Anchorage-Fairbanks run to 13½ hours. Since modernization, ARR carries around 900,000 tons of freight a year.

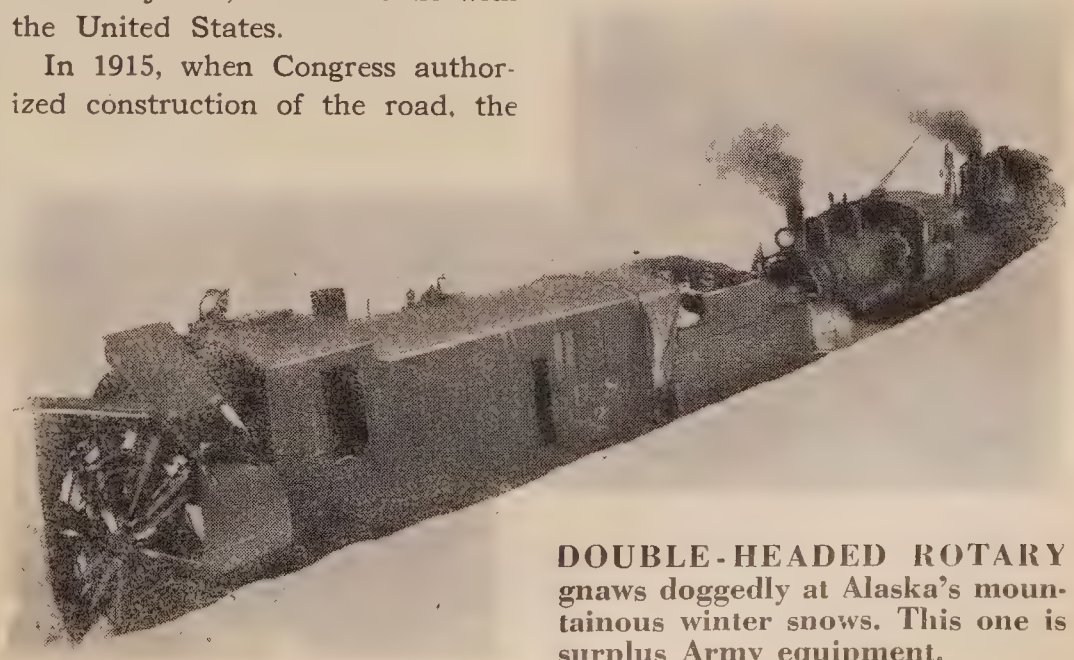
guesses the exact time the ice goes out in the Tanana River, is the headquarters of the ARR's river-boat lines. During the summer months these steamers ply the swift waters of the Tanana and Yukon rivers to Marshall, 858 miles downstream near the Bering Sea, and to Fort Yukon, 600 miles to the north.

Beyond Nenana is Fairbanks, heart of the gold country and the railroad's northern terminus, where the gold dredges thunder a stone's throw from the center of town, where Eskimos and bearded prospectors still come in from the hills for supplies, and where on June 21st each year, the town celebrates the midnight sun with a midnight baseball game.

BACK IN 1867, the United States paid Russia $7,200,000, or two cents an acre, for Alaska, a land twice the size of Texas—and got its money's worth. Since 1880 some $850,000,000 worth of gold, silver, copper, and other minerals has been taken out of the country, as well as untold millions in furs, fish, lumber, and coal. But the memory of her Russian past still clings to the Alaskan land. With the Soviet Union only thirty miles distant across the Bering Strait, the fear of a Communist future torments her people like a neurosis. The railroad, keystone of Alaska's defense system, is her lifeline with the United States.

In 1915, when Congress authorized construction of the road, the ARR was conceived primarily as the backbone of western Alaska's economy. This line eventually absorbed two private railroads—the seventy-mile Alaska Northern, between Seward and Kern, and the forty-four mile Tanana Valley, between Nenana and Fairbanks.

It took eight years, seventy mil-



DOUBLE-HEADED ROTARY gnaws doggedly at Alaska's mountainous winter snows. This one is surplus Army equipment.

NATIVE WOMEN work on right-of-way around Cantwell at edge of Mt. McKinley National Park. Their stretch of track recently won official praise for best maintenance section on entire road.

lion dollars, and an incalculable amount of human labor to build the Alaska Railroad. At last, in 1923, in the midst of a 94-degree Alaskan heat wave, President Harding, his Republican soul recoiling perhaps because the Government had to do what private enterprise would not, lifted his maul to drive the "golden" spike at North Nenana. And missed. Twice. But, with the third blow, the spike rested firmly against the steel.

Thus the Alaska Railroad became a reality. A reality, but scarcely a going concern.

When World War II broke, the road was in deplorable condition. It had never been much better off. The original construction had been piecemeal, and, in the years following, improvements had been made sparingly. Rolling stock, much of it derived from the old Panama Railway, was forty years old. Any good North American railroad company would have retired most of it years before.

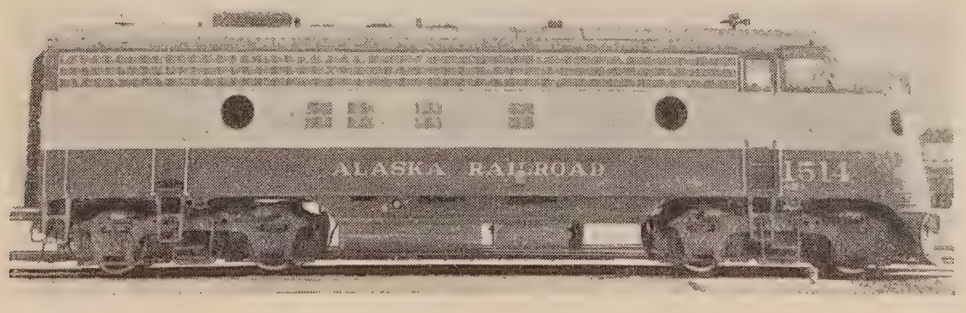
At that time an ARR official said, "If we tried to operate this road in the States, the ICC would shut us down in a minute."

By the end of the war, the line was practically inoperable. There were so many warped wooden cars bumping their flat wheels on split rails that in spring, when the roadbed is soft, at least a train a day regularly jumped the track. The old wooden trestles, falling apart from dry rot, shuddered with every train that rumbled over them.

But, however bad their equipment, ingenious Alaskans made it do. Some of it had been acquired when the narrow-gage Tanana Valley and Alaska Northern lines were absorbed, and the rest had been retired by more finicky railroads all over the world.

For a time, the ARR was practically a working locomotive museum. You could have seen Brooks and Cooke Moguls dating back to 1906, first used in building the Panama Canal, Portland eight-wheelers going back to 1883, venerable Consolidations and ten-wheelers, and even a Brill gas-car.

For a long while, three Baldwin Mikados were the only modern equipment on the whole road. The Anchorage yards had a "Plymouth" gas switcher, a shop engine which, on level track, made only twenty-five miles an hour but on a 1.5 percent grade could haul 160-ton



PLOWS fitted to diesels clear light snows from unpredictable track. Locomotives are designed to meet extreme Arctic temperatures, sometimes as low as minus 74.

loads with no trouble at all. One by one, even these sturdy old engines gave out and were sold, during the thirties anyway, for scrap—to Japan, who may well have shipped them home again, in a somewhat different form, when she invaded the Aleutians during the war.

SEVEN YEARS ago, Congress authorized a three-year, $50,000,000 improvement program. The roadbed was rebuilt. Concrete and steel trestles replaced wooden ones, and almost the entire route was relaid with 115-pound rail. The old tumbled-down rolling stock was converted, refurbished, replaced, or retired.

Today, the ARR's now-excellent equipment is mostly Army surplus. Thousand horsepower diesels were converted to extreme winter use, former hospital cars became attractive passenger coaches, and troop sleepers were turned into first-class steel boxcars, reefers, and outfit cars. In winter, ARR's heavily insulated refrigerator cars are used to keep dairy products from freezing. The shippers prefer to pay demurrage rather than risk freezing shipments in transit to stores and warehouses by trucks.

At present the road is almost wholly dieselized. On a line constantly broken by tunnels, the diesel

LOCOMOTIVES OF THE ALASKA RAILROAD

2-8-0 (Consolidation) Type

No.	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effort	Grate Area	Date
561	19x26	57-51	210	141,000	31,500	139	1944
557	19x26	57-51	210	141,000	31,500	139	1943
556	19x26	57-51	210	141,000	31,500	139	1943
554	19x26	57-51	210	141,000	31,500	139	1943
552	19x26	57-51	210	141,000	31,500	139	1943
551	19x26	57-51	210	141,000	31,500	139	1943

Baldwin built these ARR steam locomotives. All others are out of service and about to be retired.

DIESEL-ELECTRICS

No.	Class	Horsepower	Cylinders	Wheel Diameter	Weight	Date
1809	C-C	1600 at 800 RPM	16 8½x10	40	123	1952
1514	B-B	1500 at 800 RPM	16 8½x10	40	126	1953
1512	B-B	1500 at 800 RPM	16 8½x10	40	126	1953
1510	B-B	1500 at 800 RPM	16 8½x10	40	126	1953
1508	B-B	1500 at 800 RPM	16 8½x10	40	123	1953
1507	B-B	1500 at 800 RPM	16 8½x10	40	123	1953
1506	B-B	1500 at 800 RPM	16 8½x10	40	123	1953
1505	B-B	1500 at 800 RPM	16 8½x10	40	123	1952
1504	B-B	1500 at 800 RPM	16 8½x10	40	123	1952
1503	B-B	1500 at 800 RPM	16 8½x10	40	123	1952
1502	B-B	1500 at 800 RPM	16 8½x10	40	123	1952
1501	B-B	1500 at 800 RPM	16 8½x10	40	123	1952
1500	B-B	1500 at 800 RPM	16 8½x10	40	123	1952
1300	B-B	1000 at 625 RPM	8 12¾x15½	40	122	1945
1204	B-B	600 at 800 RPM	6 8½x10	40	99	1942
1203	B-B	600 at 800 RPM	6 8½x10	40	99	1942
1202	B-B	600 at 800 RPM	6 8½x10	40	99	1942
1201	B-B	600 at 800 RPM	6 8½x10	40	99	1942
1078	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1077	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1076	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1075	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1074	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1072	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1070	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1069	B-B	1000 at 740 RPM	6 12½x13	40	127	1942
1067	B-B	1000 at 740 RPM	6 12½x13	40	127	1942
1065	B-B	1000 at 740 RPM	6 12½x13	40	127	1942
1057	B-B	1000 at 740 RPM	6 12½x13	40	122	1942
1055	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1054	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1053	B-B	1000 at 740 RPM	6 12½x13	40	122	1942
1052	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1051	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1050	B-B	1000 at 740 RPM	6 12½x13	40	122	1943
1043	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1042	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1041	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1036	C-C	1000 at 740 RPM	6 12½x13	40	127	1945
1035	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1034	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1033	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1032	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1031	B-B	1000 at 740 RPM	6 12½x13	40	122	1942
1030	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1029	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1028	C-C	1000 at 740 RPM	6 12½x13	40	127	1942
1027	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1026	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1018	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1017	C-C	1000 at 740 RPM	6 12½x13	40	127	1945
1014	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1013	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1010	C-C	1000 at 740 RPM	6 12½x13	40	127	1943
1001	B-B	1000 at 740 RPM	6 12½x13	40	120	1944
1000	B-B	1000 at 740 RPM	6 12½x13	40	120	1944

B-B 99 Ton 600 H.P.
Starting Tractive Effort @ 18% Adhesion 35,640 lbs.

B-B 123 Ton 1500 H.P.
Starting Tractive Effort @ 18% Adhesion 44,280 lbs.

C-C 123 Ton 1600 H.P.
Starting Tractive Effort @ 18% Adhesion 44,280 lbs.

B-B 126 Ton 1500 H.P.
Starting Tractive Effort @ 18% Adhesion 45,360 lbs.

B-B 120 Ton 1000 H.P.
Starting Tractive Effort @ 18% Adhesion 43,200 lbs.

C-C 127 Ton 1000 H.P.
Starting Tractive Effort @ 18% Adhesion 45,720 lbs.

B-B 127 Ton 1000 H.P.
Starting Tractive Effort @ 18% Adhesion 45,720 lbs.

B-B 127 Ton 1000 H.P.
Starting Tractive Effort @ 18% Adhesion 45,720 lbs

$$TE = \frac{308 \times H.P}{M.P.H.}$$

Nos. 1500-1508, 1510, 1512, 1514, 1809, 1201-1204 were built by Electro-Motive with General Motors engines; No 1300 was built by Baldwin-Westinghouse All other ARR diesel-electrics were built by Alco-GE with McIntosh Seymour engines

Nos. 1043, 1042, 1041, 1031: Single Unit Control

Roundhouse Switchers

51	0-4-0	25 ton	150 H.P.	GE	1941
50	0-4-0	25 ton	150 H.P	GE	1944

has been a godsend. Formerly, smoke and gas collecting in tunnels endangered crews, who in winter often have to remove huge icicles and clear ice encrusted tunnel walls before trains can pass through. In some places, tunnels have even been steam-heated and equipped with doors.

Typical of changes in the line is the elimination of the famed Loop near Bartlett Glacier on the Seward-Portage run. During the war, the Loop had been so badly neglected that maintenance men used to say, "When the termites in the bridge hear a train coming, their boss yells, 'Lock arms, boys, and we'll hold these timbers together.' "

The 3.5-mile stretch of track, in surmounting a .75-mile grade, used to climb along the mountains, over high bridges and trestles, through two snowsheds and six tunnels, to form one complete circle and one three-quarter turn. But over the years since the Loop was constructed, the Bartlett Glacier had retreated, leaving behind it a relatively easy ascent. Now a 1.1-mile section of track climbs a 2.4 to 3 percent grade through nine steel culverts and over a small fourteen-foot trestle along a route well out of the path of regular snow slides.

The great diesel maintenance and repair shop at Anchorage is quite modern. Heating and drainage are major problems when temperatures sometimes drop to 74 below. But the building, put up in 1949, is heavily insulated and heated by hot air shot down into the plant through ducts near the roof. Outside, parapets trap melting snow and ice and convey it to a drainage system. The ARR also had to provide fish ladders for salmon who on their way upstream to spawning grounds suddenly found themselves in the middle of the yard's power plant with no place to go.

Fairbanks' new hundred-acre yard is equally up-to-date. It was hacked out of swamp and tundra, where perma-frost poses a constant threat. Frozen ground often heaves violently, and a building caught in the frozen earth can easily be broken in two. Railroad engineers succeeded in minimizing this danger by laying an insulating layer beneath buildings. Perfectly designed, the yard is laid out so that it can be expanded if the proposed line from the States ever materializes.

BUT EVEN with the most modern equipment, train operation on the Alaska Railroad is a constant battle. Crews working along the line in warmer months are tormented by mosquitoes so vicious that sometimes, in the days of the Czars, prisoners condemned to death were exposed to them to be eaten alive.

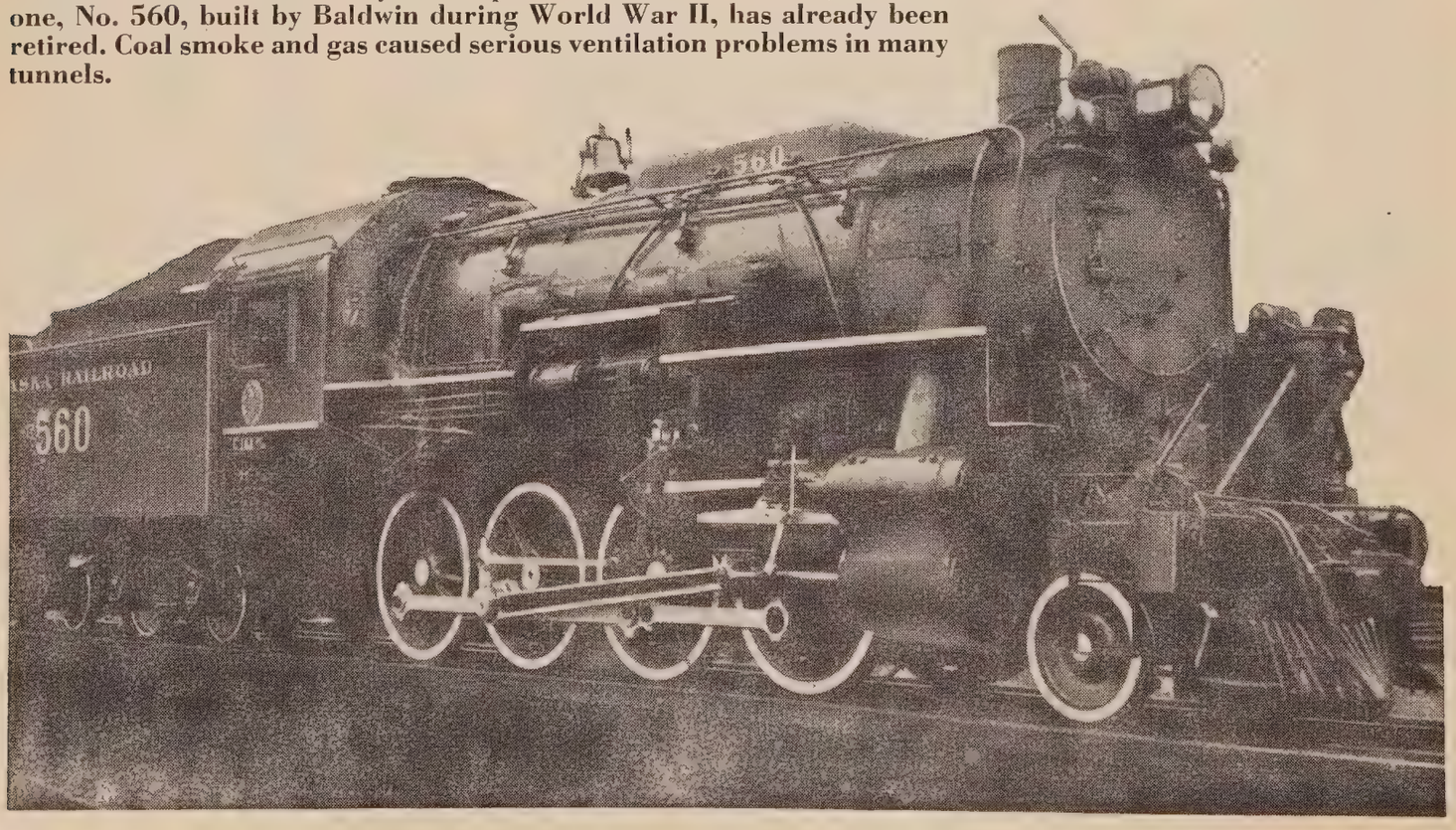
Black flies and invisible gnats, called "no-see-ums" by the Indians, burrow under the skin at the hairline and cause violent infections. Beavers gnaw out stakes, and bears chase the maintenance crews. Trains may wade through water two and a half feet deep where only the day before the roadbed was bone dry. Then, when it freezes, crews have to use pickaxes and explosives to clear the ice-covered right-of-way.

Violent winds have been known to topple bridges, and floods to wash out piers. When the ice goes out, giant floes push up over the river banks, blocking the tracks.

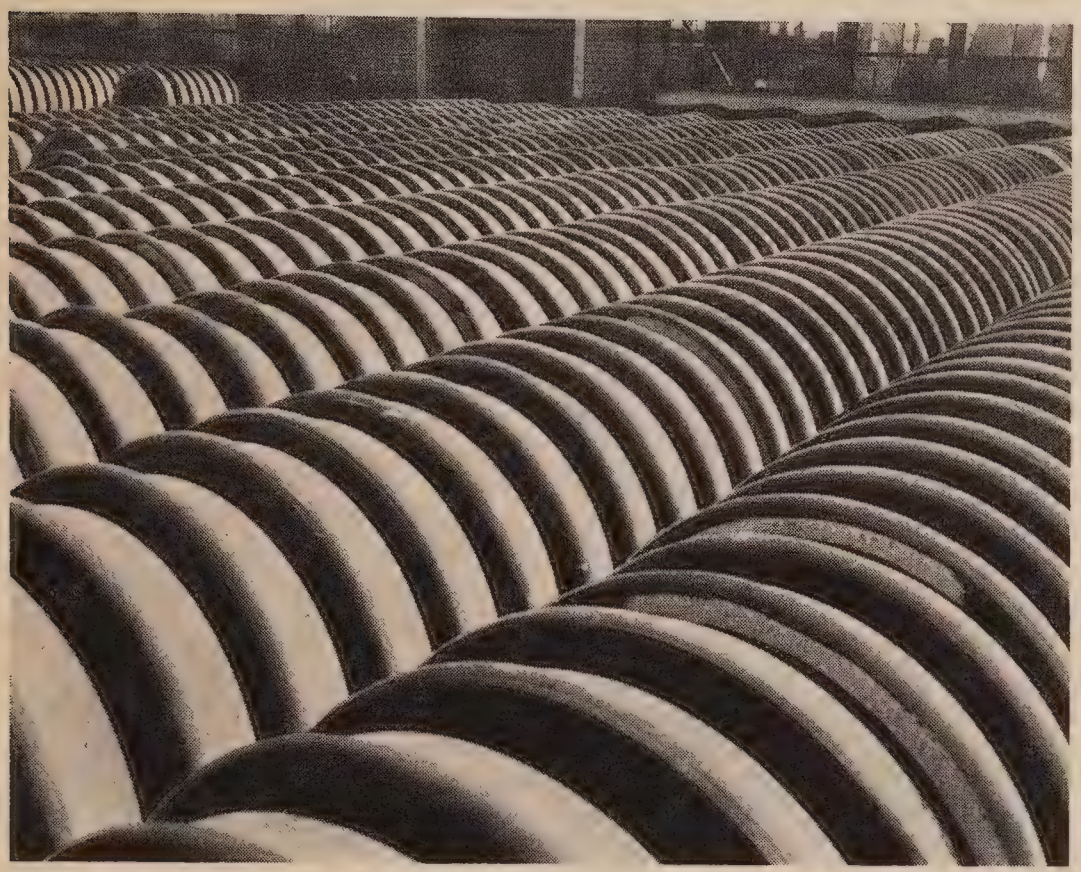
To make things worse, the very ground over which the railroad runs is often on the move. In the Nenana River Canyon the line clings to a wall of soap-like schist rock. When

(Continued on page 59)

CONSOLIDATIONS are only steam power left on the Alaska, but this one, No. 560, built by Baldwin during World War II, has already been retired. Coal smoke and gas caused serious ventilation problems in many tunnels.



INFORMATION BOOTH



Ask Barbara

RAILROAD QUESTIONS are answered here every month by our research expert — as many as space permits. Top priority is given to subjects that seem to be of wide general interest. Address Miss Barbara Kreimer, *Railroad Magazine*, 205 E. 42nd Street, New York 17, N. Y. No replies will be sent by mail.

ROWS OF CAR WHEELS, like gargantuan poker chips, make a distinctive pattern as they await shipment outside Frisco's wheel shop at Springfield, Mo.

1

Question *As the Pennsylvania operates in anthracite regions, why didn't it ever use Camelback engines?*

Answer The PRR did build three Camelbacks at its Juniata shops in 1899, to compete with the Reading. Numbered 698, 700 and 820, and designated as E-1 Class Atlantics, they had 20½ x 26-inch cylinders, 80-inch drivers, and a boiler pressure of 205 pounds. The firebox was a combination of Belpaire and Wootten designs. One distinctive feature was the arrangement of six-wheeled tanks, which were discarded when the engines went over to the Long Island years later. Renumbered 198, 199 and 200, they remained in LIRR service until around 1912, when they were scrapped.

2

Q *I am interested in data on various designs of track spikes and splice bars. Can you recommend source material?*

A The *Railway Engineering & Maintenance Cyclopedia,* put out by Simmons-Boardman Publishing Corporation, 30 Church St., New York City, covers this type material.

3

Q *I have heard that car wheels are used in interchange service. What does this mean?*

A It means that wheels can be applied to the cars of any railroad in any one of thousands of shops. A complete record is kept on every wheel. Data include the road applying the wheel, the serial number, the date and place of casting, and the manufacturer, as well as the weight and diameter—all of which is marked on the outer and inner surface of the wheel itself.

4

Q *Why is the Lehigh Valley's yard at Niagra Falls so big? I was under the impression it was a branch end-of-the-line and only a transfer point. Could this be a joint yard? Please explain how the transfer is made between it and Canadian yards.*

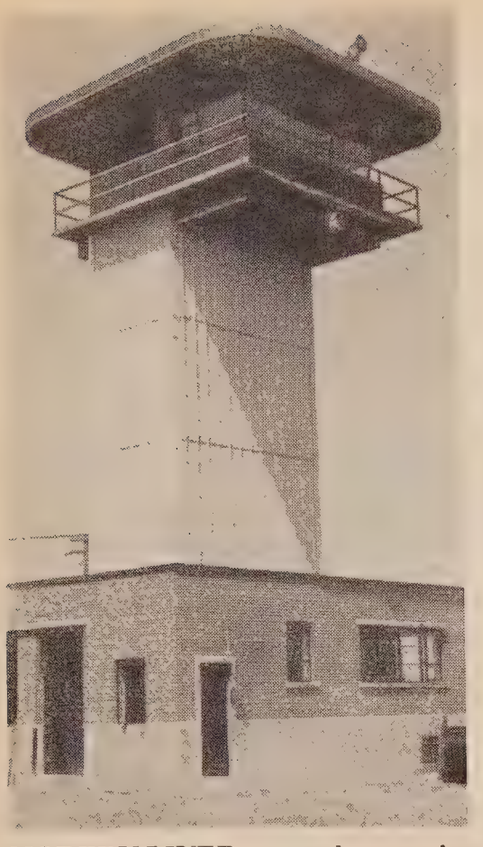
A The yard is, in a sense, the end of a branch line, but is comparable to main-line service insofar as freight movement is concerned. It is not a joint yard, although interchange with the Canadian National, Wabash, Michigan Central, Chesapeake & Ohio (Pere Marquette), and New York Central contributes heavy traffic. Yard crews pick up and deliver freight cars twice daily for Niagra Falls proper. Three freight trains are dispatched from this point, from three to four westbound trains are received, and a pickup train from Suspension Bridge to Buffalo has a daily run.

Loaded cars from connection points with other roads are brought to the yard by the delivering carrier. Lehigh Valley freight for these connection points is delivered by yard crews directly.

5

Q *Does the Lackawanna still use steam engines on some local passenger trains?*

A No; only diesel power.



MODERN-LINED control tower in Canadian Pacific yards at Cote St. Luc, Montreal, reflects new trend in railroad architecture.

TRAIN-ORDER CRANE stands empty-handed on Milwaukee Road at Comus, Minn.

6

Q *Why are the railroads slow in modernizing such structures as signal towers, many of which look positively archaic?*

A They are not slow. Modernization of railroad buildings, including towers, is being pushed as fast as revenue permits. A great many signal towers have been built or rebuilt in keeping with the principles of modern design. One example is the Canadian Pacific control tower pictured here. This structure, located in the new terminal freight yards at Cote St. Luc, Montreal, blends the smooth streamlined touch of up-to-date architecture with the practical planning of improved operation facilities. Looking through polaroid window, the control operator watches cars roll down the hump, and checks their speeds by means of the electrically-charged retarders.

7

Q *How do train-order cranes function?*

A These are used by operators for delivering "flimsies" to the crews of moving trains. Over the years, patents have been granted to more than 60 such devices. At first, operators delivered the orders by hand, using a rough willow hoop equipped with a handle and a small snap of spring wire to hold the orders. These were superseded by hoops of finished wood, bamboo, or rattan with still larger handles. The hoop was designed to be picked up by the crew man's outstretched arm. He would then take the orders out of the snap, and throw off the hoop.

More recent developments for delivering train orders include the post and crane structures. A common type is equipped with three fasteners, one above the other, which hold the hoops so that the brakeman and fireman can reach the orders without the operator's help. A drawback to this type is that it cannot be seen clearly in dark weather, snowstorms, sandstorms, etc. Wherever possible, lights and reflectors have been installed above the hoops.

8

Q *What type watch are railroad employes required to use?*

A It is a rule that railroaders working in engines, trains, yards, etc., must carry a standard 21-jewel watch which has been tested for accuracy under varying conditions. These watches are subject to inspection once a month.

9

Q *Please tell me about the Railroad Management Seminar held at the University of Michigan last spring.*

A This seminar, sponsored by the University's Transportation Institute and the Michigan Railroads Association, was an experiment to interest railroad companies and colleges in problems facing the graduates who want to enter the railroad industry. One point of discussion was the degree of specialization required for engineering students training for such work. Other topics included the possibly increasing need for railroad men who have a college background of liberal arts or business administration.

10

Q *How long is the New York City subway-elevated system?*

A By route miles, the system's total is 236. Measured in terms of double-tracking and, in many stretches, quadruple-tracking, the number of miles is 729.

11

Q *Is the four-wheel leading truck of a locomotive fitted with a swing bolster such as that used on a two-wheel truck?*

A Yes. The center plate on which the locomotive's frame rests is suspended in a bolster with a swing of as much as a foot.

12

Q *Is is true that Commodore Vanderbilt once called George Westinghouse a fool?*

A Yes. When Westinghouse perfected his airbrake in 1875 he offered it to Cornelius Vanderbilt, then president of the New York Central & Hudson River. Vanderbilt scribbled a reply to the inventor which read, "I have no time to waste on fools!"

13

Q *What is a "sun kink"?*

A This is an abnormal bend in a rail caused by expansion of the metal during hot weather, and more particularly by "frozen" joints. Regular rails are laid with the expectation that the steel will expand about 1/16th of an inch for each twenty-degree rise in temperature. For that reason, adjoining rail-ends are left with a small gap between them. The holes which receive the angle-bar bolts must be drilled slightly oversize to permit lineal play. Sometimes joints rust firmly together and cause such pressure on spikes and

"WHO CAN IDENTIFY this train with its 4-4-0 engine, No. 1728?" inquires Robert Guhr, P. O. Box 12, Glenview, Ill. He thinks photo was taken a half-mile north of Clinton, Iowa.

other fastenings that the track may let go. Track workers make periodic inspections of rail joints. By loosening bolts to permit full expansion and then tightening them again, they can prevent general damage.

14

Q *I have heard it said that Fred Harvey's last words were, "Slice the ham thin, boys!" Is that true?*

A No. Oldtime boomers used to swap jokes about Harvey House restaurants on the Santa Fe, and this was one of them.

15

Q *What is a business car?*

A This is a Pullman-type car assigned to railroad officials. Equipped with lounge, bedroom, bath, and kitchen, the car is coupled behind whichever train the official is riding. An operating officer's job involves much travel and inspection. In such cases it is usually better for him to work in the privacy of this "office-hotel-room" arrangement.

16

Q *I understand the Chesapeake & Ohio got rid of its Vista Dome cars because they were too large for certain tunnels. Is this true?*

A Not that we know of. The C&O was designing a new daylight-run train. The Vista Dome cars to be used on it were delayed in production, and while awaiting them the C&O needed the rest of its new cars for regular service. Later, when the Dome cars were ready, there was no other new equipment available for the proposed daylight train, so the company decided to sell its Dome cars to the Baltimore & Ohio. They did this in 1950.

17

Q *Is it true that E. H. Harriman once started what was intended to be a 'round-the-world railroad?*

A Yes. He proposed building a railroad to the Bering Strait to connect with a line constructed by the Russian government. The plan was actually launched about 1900. After failing in negotiations with Japan regarding the South Manchuria Railway, Mr. Harriman decided to include the Alaska Railroad in the scheme. With this vital link assured, he was ready to buy the Chinese Eastern from Russia. He hoped to double-track the Trans-Siberian line in exchange for trackage rights between North Manchuria and the Baltic Sea. Unfortunately, his death in 1909 brought an end to the fabulous blueprints of a continent-to-continent rail system which might have changed world history.

18

Q *What has happened to New York Central roundhouses at Harmon, Selkirk, Syracuse, Batavia, and Gardenville, N.Y., and Wesleyville, Pa., now that the trains in these areas have gone diesel?*

A At Harmon, one roundhouse is being used for storage; the other one there has been razed. At Selkirk, one still stands and is in use, while a second has been torn down. The roundhouses at Syracuse and Gardenville are slated for demolition. The one in Batavia is

THIS VISTA DOME car was one of several built for the Chesapeake & Ohio. Instead of being put into service on "George Washington's Railroad," however, they were sold to the Baltimore & Ohio.

CREW MEN wearing derbies pose proudly beside the high-stacked Two-spot of the San Francisco & San Joaquin Valley (now part of the Sante Fe).

used for storage. Although the coal dock at Wesleyville has been dismantled, the enginehouse there is used partly to house diesels and partly for storage.

19

Q *Does the Akron, Canton & Youngstown have any steam runs?*

A No, it is fully dieselized.

20

Q *Is it true that each passenger trainman has a differently designed ticket punch?*

A Yes, indeed. Ticket punches have distinctive forms, as the identities of thousands of men engaged in passenger service depend upon them. The punches have various shapes—hearts, spades, squares, triangles, circles, semi-circles, and so on. When a conductor receives a punch, it is registered in his name at division headquarters and entrusted to his care for as long as he remains with the road. It is not to be duplicated. Some punches have been used for fifty years or more. In rare cases conductors pass them on to sons or friends who succeed them on the same run. When a conductor retires, his last official act is to turn in his ticket punch.

Years ago, trainmen used to void passenger tickets by simply marking them with pencil. However, dishonest travelers often erased the markings, so that tickets could be used again. As a result, the roads lost much revenue. By getting off the train at a stop, the trickster would buy a second ticket, which also would be voided. As the second ticket was cheaper than the first, he would surrender it at the end of the trip. He would hold the through ticket and use it again at the starting point, or sell it. Thus many a through ticket made the trip several times.

The punch system was adopted in 1852, having been devised by an Erie conductor, "Pappy" Ayres, who was determined to put a stop to this swindle.

Missouri Pacific Lines

HIEROGLYPHICS? No. Just a few of the many designs of conductors' ticket punches. Every passenger trainman has a different stamp, which is almost as important a means of identification as his signature.

21

Q *I would like to get recordings of Haywire Mac's songs. Are these available?*

A Harry K. McClintock recorded all of his songs for Victor between 1926 and 1928. Here is a list of his songs.

The Bum Song	**No. 21343**
Hallelulia, I'm a Bum	
Bum Song No. 2	**No. 21704**
The Big Rock Candy Mountains	
Hobo Spring Song	**No. V-22003**
If I Had My Druthers	**V-40112**
Roamin'	**No. 22845**
Can I Sleep in Your Barn?	**No. V-40264**
Fifty Years From Now	**No. V-23614**
When It's Time To Shear the Sheep	
The Trusty Lariat	**No. V-40234**
Fireman, Save My Child!	
Ain't We Crazy?	**No. V-40101**

He also made recordings of some traditional cowboy ballads. At that time no music for those songs was in print.

Billy Venero	**No. 21487**
Texas Rangers	**V-40148**
Sam Bass	**No. 21420**
Jesse James	
Old Chisholm Trail	**No. 21421**
Red River Valley	
Good-bye, Old Paint	**No. 21761**
Cowboy's Lament	
Trail to Mexico	**No. V-40016**
Get Along, Little Dogies!	
Circus Days	**No. 21567**
Man on the Flying Trapeze	
Jerry, Go Ile (Oil) the Car!	**No. 21521**
Dad's Dinner Pail	

22

Q *Where can I find a library specializing in railroad subjects?*

A If you ever visit Washington, D.C., you could use the world's largest transportation library, which is maintained by the Bureau of Railway Economics, Association of American Railroads, in the Transportation Building. Here you will find, in addition to technical and historical information, special collections of documentary material. Included are Government reports, files of American and foreign periodicals, including *Railroad Magazine;* annual statements of railroad companies and public utilities commissions, proceedings of railroad clubs and associations, maps, newspaper clippings, manuals, directories, and other reference works. The library is used extensively by men in railroading as well as by editors, students, authors, educators, researchers, business men, and even politicians.

23

Q *Why is the Southern Pacific's* Golden State *equipped with a rear car of blunt design? Why doesn't this streamliner have a rounded, back-windowed observation car such as those used on the Rock Island's* Golden State?

A The Rock Island *Golden State's* rear car is an observation lounge and therefore has the rounded end. On the SP's *Golden State,* however, the lounge car is placed near the center of the train—a convenient location for passengers, in view of the train's length. The rear car on this train is a sleeper and so has the blunt design you mention.

Running Extra

A NOTE from Hugh O'Neil, 659 23rd St., Ogden, Utah, takes us back more than a few years. Hugh is interested in two famous locomotives, the Central Pacific's *Jupiter* and the Union Pacific's 119, which were used in the golden-spike ceremonies at Promontory, Utah, when the first transcontinental railroad was built. He writes: "The *Jupiter* was scrapped in 1893, but the other one's end is a mystery." Having searched in vain for records of the 119's scrapping, he asks our readers for facts about her fate.

During the second World War, J. J. Sloyer, Millbury, O., was a locomotive fireman on an Army consist in Italy. He tells us that when a train stalled in a tunnel between Salerno and Potenza in 1944, his crew was called to help in operations during the crisis.

"We left Salerno," he recalls, "with a 300 T-1 locomotive, and after joining two diesels on the head end we went as pusher over the hill and through about 32 tunnels on the run. Our engine backed the entire distance to Potenza, with the smoke-belching stack ahead of us. The only means of getting steam was to black-smoke her all the way. Going up hill we had to keep the speed down to about 10 to 15 miles per hour.

"However, our speed dropped, and while we were in the dark tunnel many boys passed out from the thickness of acrid smoke. I came close to it myself. Later, after we got into the fresh air, we learned that from 200 to 300 people, trapped in the first train, had died before rescue parties could reach them. We never did find out details. I have often wondered how I could get hold of reports which must have been issued at the time—or suppressed because of the wartime emergency." Perhaps some reader can supply the missing details.

H. L. Kelso

REAR CAR of Southern Pacific's *Golden State* is this flat-end sleeper. Observation lounge car is used in middle of train.

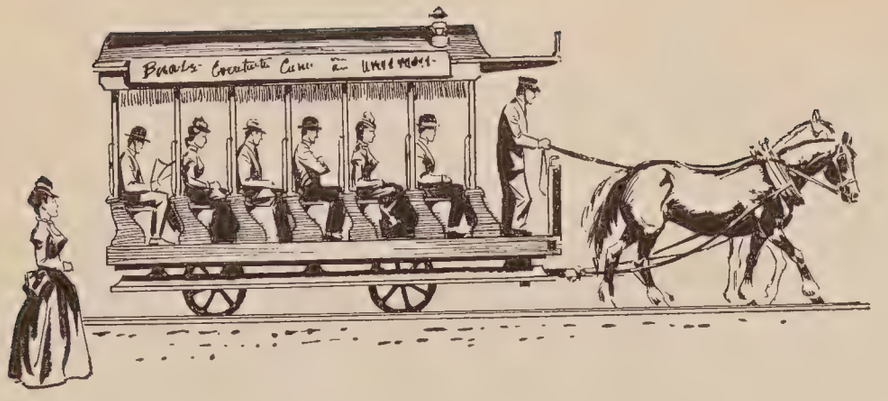
The locomotive photo on this page, from A. F. von Blon, Jr., 3621 Windsor Ave., Waco, Texas, shows an old-timer built by the Rhode Island Works in 1893. A Forney type, she became the *Charles H.,* No. 9, and eventually ran on the Lake Street Elevated in Chicago. For a short time she belonged to the Delta Chemical Co., Wallo, Mich. Our correspondent wants to know if any reader recalls this old engine.

Clifford M. Hemenover, a clerk of the Kansas City & Denver Railway Post Office, tells us that the data we quoted in a recent issue regarding short and long mail routes is now obsolete. Mr. Hemenover points out that the Santa Fe's Kansas City to La Junta (Colo.) run, which we referred to as the longest run of a single crew, is only 540.49 miles, not 569. He adds that the UP trip from Kansas City to Denver, 640.36 miles, really qualifies as the longest run of a crew.

We reported that the Delaware & Hudson's Carbondale & Scranton route was the shortest electric railway run. Just after our figures were compiled, it was taken off the schedule. Another short RPO run, on the Lackawanna's electric line, Summit & Gladstone (N.J.), was discontinued last June.

Many readers report that the photo in the July issue, page 14, showed narrow-gage Rio Grande Ry. water train.

Once on Chicago "El," Forney rusts her heart out in the weeds.



FROM

For More than Seventy Years, Well Nigh Everything on Wheels, Including Steam Locomotives, Rolled over the Rails through the Narrow, Hilly Streets of Halifax, Nova Scotia

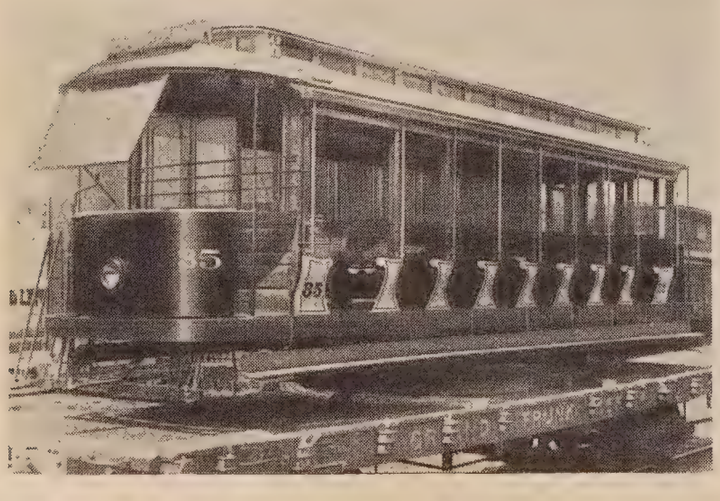
ONE of the principal sufferers of the great explosion at Halifax, Nova Scotia, on December 6, 1917, was the Nova Scotia Tramway & Power Company, which operated the local streetcar system. That morning, in the harbor, a Norwegian tramp steamer had collided with a French munitions ship heavily loaded with thousands of tons of explosives. Fire broke out aboard the French ship, and minutes later the cargo exploded with a terrific blast that devastated a large section of Halifax as thoroughly as could any atomic bomb, killed or injured a quarter of the population, and almost completely knocked out the street railway system.

Power lines in the city became a tangled web of broken and dangling wire, and nearly every streetcar was put, at least temporarily, out of commission. Two cars were so completely demolished that nothing was ever found of them save a few twisted and broken trucks. In a matter of minutes, Halifax' transportation system had been set back half a century.

In 1858, when the Nova Scotia Railway drove its steam lines across the peninsula toward Halifax, the company, in a moment of shortsighted thriftiness, established its Halifax station two and a half miles from the city and its harbor. The only link between Halifax and the railroad was a single execrable road which carts and wagons carrying passengers and freight north to the station daily churned into a nearly impassable quagmire. Clearly something had to be done.

But the American Civil War was raging, and some Halifax merchants had their money tied up in blockade runners, so it wasn't until 1866 that Halifax got its first street railway. In that year William D. O'Brien, a public-spirited local citizen, organized the Halifax City Railroad and started construction of a line from

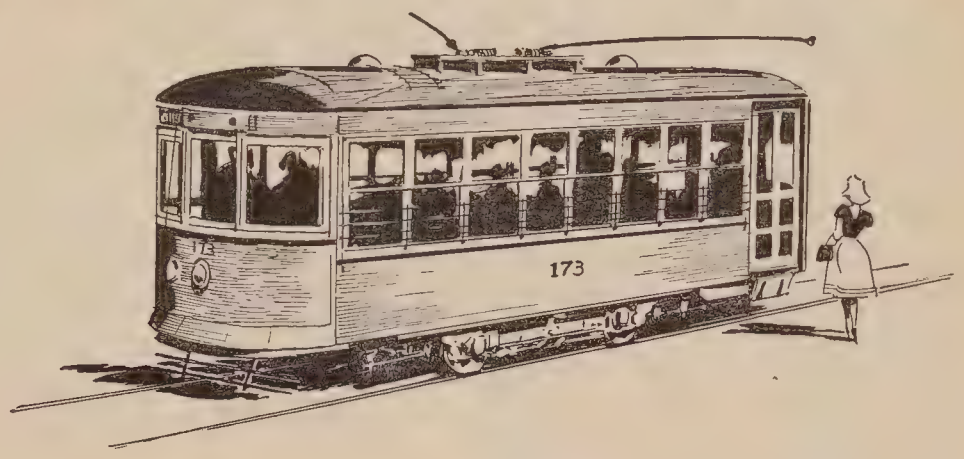
SUMMER CAR before the great days of Birneys. Ottawa built eight in 1906-7, Halifax scrapped them in '20. *Robert R. Brown*



BOOMER BIRNEY. No. 156, built by Brill in 1917, went to Cape Breton in 1923, and to Halifax in 1932. *Stanley Borden*

HORSECARS TO BIRNEYS

By
ROBERT R. BROWN



the railroad station through the principal streets of the city to Freshwater, near the docks at the south end of town. Operations began on June 11, 1866, with five small passenger cars, two platform cars, and about fifty horses.

The opening of the horsecar service was a gala event. There was an excursion led by a military band riding on the two platform cars, followed by the five passenger cars carrying the provincial governor, the commander-in-chief of the army, the mayor and aldermen, a number of prominent citizens, and their ladies. An immense gathering of people lined the route to see the cars pass. The carbarn was decorated with evergreens and flags, and a reception was held there for the invited guests, complete with speeches, wine, and a sumptuous luncheon.

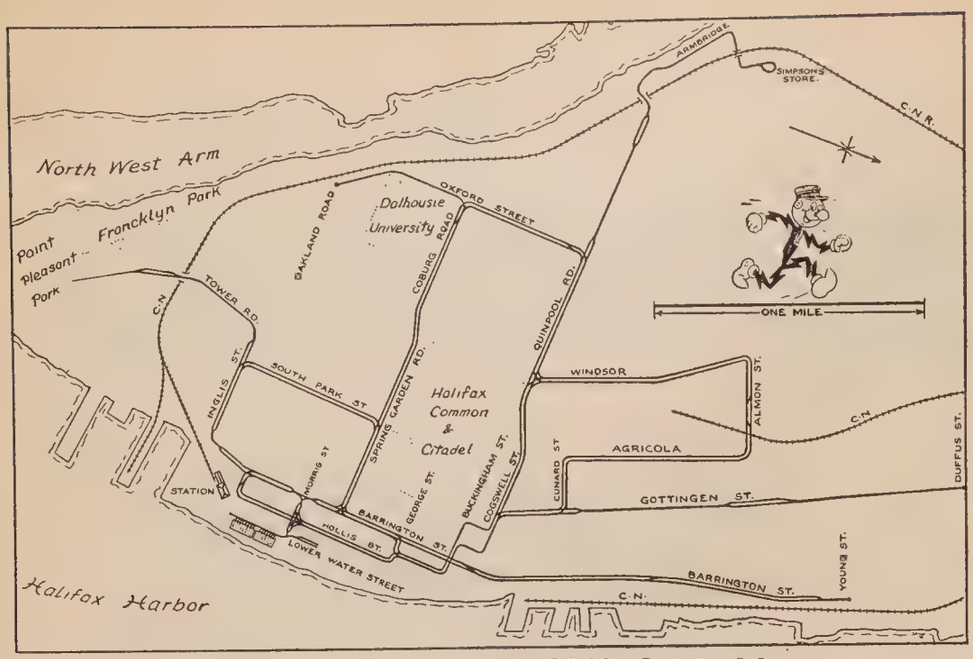
Three years later, O'Brien built a branch line out Spring Garden Road and, to eliminate the need of uncoupling the "hayburners" at the end of the line, a small turntable was installed so that the horses could turn the cars easily. It was quite a novelty, and O'Brien was justly proud of it. That same year, he laid a track on Lower Water Street with the intention of operating a passenger and freight service from the railway station direct to the wharves, connecting with the trans-Atlantic and coastal steamships and sailing vessels. The idea was a good one, and the service would have been a great convenience, besides being much less expensive, but the cabmen and carters, a turbulent and influential group, threatened with the loss of their livelihood, succeeded in blocking the operation of the line.

Not long after this, the townsfolk were treated to the astonishing and perhaps alarming sight of a large locomotive, hauled by spans of oxen, moving slowly over the un-

ALAS, THE LAST! March 26, 1949, saw the farewell run of Birneys downtown. After April 30, all Halifax street railway lines were abandoned.

Robert R. Brown

GOOD-BYE, MY FRIENDS, GOOD-BYE
GOOD-BYE MY FRIENDS, THIS IS THE END; I'VE TRAVELLED MILES AND MILES
AND WATCHED YOUR FACES THROUGH THE YEARS, SHOW ANGER TEARS AND SMILES.
ALTHOUGH YOU'VE CRITICIZED MY LOOKS AND SAID I WAS TOO SLOW.
I GOT YOU THERE AND BROUGHT YOU BACK, THROUGH RAIN AND SLEET AND SNOW



HALIFAX LINES as they were in early 1949. Original horsecar routes ran from present railroad station along waterfront to what is today Young Street.

used car tracks among the hundreds of carts and wagons and excited horses on busy Water Street. William Montgomery, a local manufacturer, had an order to build ten locomotives for the Intercolonial Railway, so he decided the best way to move them the three miles from his machine shop at Freshwater to the railroad station would be over the unused Lower Water Street streetcar tracks, which fortunately were the same gage as the railway (5 feet 6 inches). So many people objected, however, that subsequent locomotives were delivered by another less congested route. Soon after, the objectionable tracks were removed.

In 1876 the Intercolonial Railway, which had taken over the Nova Scotia Railway, decided to build a new station much nearer the center of the city and asked O'Brien to move his tracks to an adjacent parallel street at the railway's expense. To everybody's surprise, he truculently refused, and, without warning, sold his cars and horses and ripped up the tracks. The truth of the matter is probably that he wasn't making much money, and was grateful for the excuse to throw in the towel. For the next ten years, Halifax' only public transportation was a very primitive horse-operated bus service which no one liked.

In 1886, the Halifax Street Railway made a fresh start with a new standard-gage, horse-operated railway constructed for the most part over the routes of O'Brien's earlier line. The venture was not a great success. The little blue Stephenson horsecars were slow and unreliable, and, after only four years of operation, the company went bankrupt. It was reorganized in 1890 as the Nova Scotia Power Company, but instead of being able to electrify its lines as it had planned, because its working capital was limited and revenues low, the company was forced to curtail drastically even its existing services.

FINALLY, in 1895, the property was acquired by the Halifax Electric Tramway Company, which had ample resources, and the conversion to electric operation proceeded rapidly. Car Number 2 made a test run on February 12, 1896. On May 31, the horsecars made their farewell run to the northern Richmond suburb over the same route that a half century later Halifax' last electric car was to follow.

The new tramway company gave excellent service, expanded from time to time as the city grew, and prospered in a quiet, unspectacular way. The company's cars, mostly of local manufacture, were all single truck. The narrow streets in downtown Halifax made a slender rail strip necessary, and the operation of double-truck cars was impossible. In accordance with the fashion of the time, even numbers were assigned to closed cars and odd numbers to open ones. But apparently only the bodies of the first twelve cars were bought. Each spring twelve closed cars would be retired for the summer, and their trucks, motors, and other equipment used to fit up the open car bodies. In the autumn, the process was reversed. Besides being a nuisance, this practice damaged the bodies, and after a year or two additional trucks were also acquired so that every car was fully equipped.

Most bluenoses are of Scottish origin, and thrift is their greatest virtue, so the company did not disdain the use of good second-hand cars. In 1902, it bought three very small open cars, apparently from somewhere around Boston, which retained their original numbers—37, 39, and 41. They had no bulkheads and appear to have been converted horsecars. Around 1906 they were sold to the Yarmouth Street Railway which used them until 1924. Four larger open cars, called for some unknown reason the *Blueberry Specials,* were bought in 1904 from the Worcester Street Railway, and they too kept their original numbers—53, 55, 57, and 59.

All these early cars had open platforms, and, in wintertime when cold damp winds blew in from the Atlantic, the poor motormen were nearly frozen. About 1902, the cars were fitted with closed ends by the addition of a three-window structure above the dash. This afforded some protection, but, as the platform sides were still open, except for folding iron gates, the front platform was still a chilly place to work. Around 1911, several local women's clubs became interested in the plight of the platform men, and their agitation led to the enactment of a provincial law requiring completely enclosed platforms. Open cars were fitted with window sashes which could be let down in rainy weather.

In spite of their early hardships, conductors and motormen in Halifax were always very polite and obliging, and, unlike those in many other cities in this decadent age, they continue so to the present day. Some thirty years ago, a little old lady just in from the country boarded one of the aged two-man cars on the Armdale route, looking for her grandson's home. She was rather vague about the address. "Don't worry, lady, we'll find him for you," said the conductor as he hopped off the car and ran into a corner grocery seeking information. He did this three or four times until finally he found the address. The house was near the corner so he escorted his passenger to the door and made sure it was the right address before he left her. Of course they don't do that sort of thing nowadays, but the friendly attitude of the operators still helps to make a ride in Halifax a real pleasure.

Like many other street railways, during the First World War, the company suffered severely from a manpower shortage and was obliged to hire twelve women to work as conductors. They proved to be very efficient and satisfactory.

In 1917 the company was reorganized as the Nova Scotia Tramway & Power Company. The explosion in the harbor that winter promptly crippled the system. Poles and overhead wires in the north end of the city were laid flat, and power had to be shut off for many days. Many of the company's employees had been injured, and so repair work moved ahead slowly. It was some time before the system was functioning properly again. The north end of the city was so completely devastated that tram service beyond Richmond was never restored.

But as soon as the war ended, the company embarked on a modernization program. The city had grown enormously, and not only was the rolling stock inadequate, but most of the cars were in poor condition. In 1919 six good used cars were bought from the Montreal Tramways Company, and twenty-four

Minneapolis Tribune

SO LONG! Minneapolis railfans piled aboard No. 1269 recently when the 4th Avenue-Glenwood line, city's first electric route, was abandoned. Wire-gated 1269 now serves University of Minnesota campus.

Birneys were ordered from the St. Louis Car Company, for delivery the following year. At that time the rule of the road in Nova Scotia, as in England, was 'Keep to the left,' but three years later the custom was changed to conform to the general North American practice. The conversion of the old type cars was relatively simple, since they had been built originally with steps on both sides, but converting the non-standard Birneys involved a major surgical operation; new doors had to be cut in on the opposite sides, the original doors closed up, and all the controls moved. In after years it was easy to recognize the old 'south paws' by their scars.

IN 1926 the company decided to retire all the old cars and use nothing but Birneys; twenty were bought from Baltimore, eight from Toronto, and four new ones were built by the Ottawa Car & Manufacturing Company. So in 1928, when the company's name became Nova Scotia Light & Power Company, it had a modern fleet of fifty-six Birneys. Six more were picked up at bargain prices in 1932, three from the Sydney and Glace Bay lines of the Cape Breton Electric Company, which were in fair condition, and three from the Moncton Tramways, Electricity & Gas Company, which were in such poor condition that they were broken up immediately and the salvaged parts used to recondition the three from Cape Breton.

Halifax was beginning to be known as the home of 'boomer' Birneys, but more were to come. During the first two years of World War II the population of the city doubled, and additional cars were urgently needed. Fourteen were bought from Toronto and two from Cape Breton. Two more were found carrying miners to and from an asbestos mine at East Broughton, Quebec. These two had belonged formerly to the street railway in Sherbrooke, Quebec, and one of these had originally been car C of the Dover, Somersworth & Rochester Railway in New Hampshire. It was one of the few standard Birneys built by the Wason Manufacturing Company of Springfield, Massachusetts. Finally, in 1943, five more

(Continued on page 69)

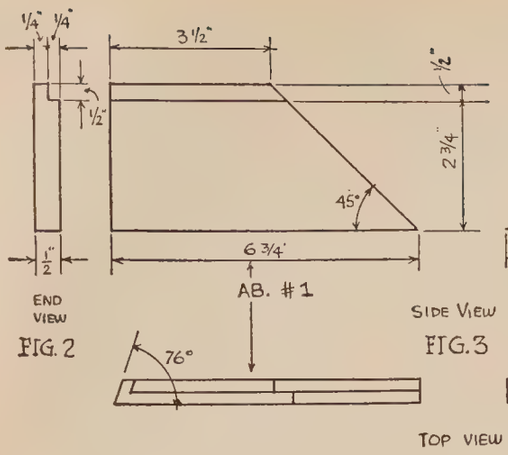
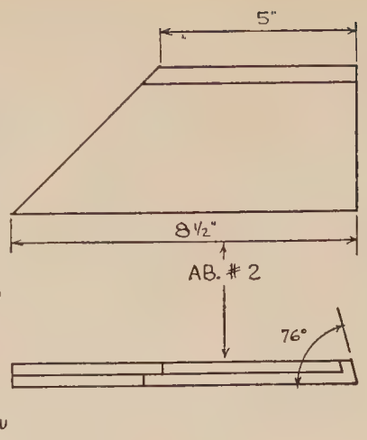


FIG. 2

FIG. 3



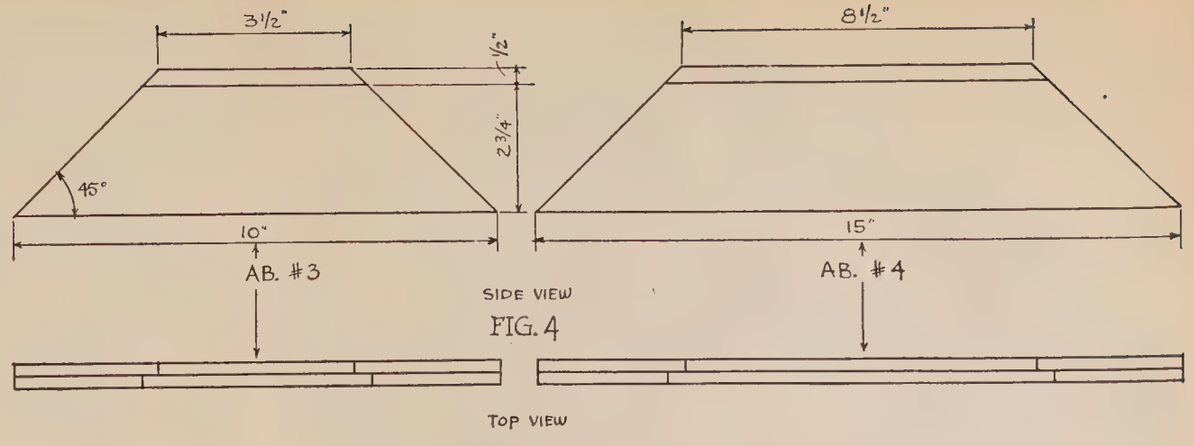


FIG. 4

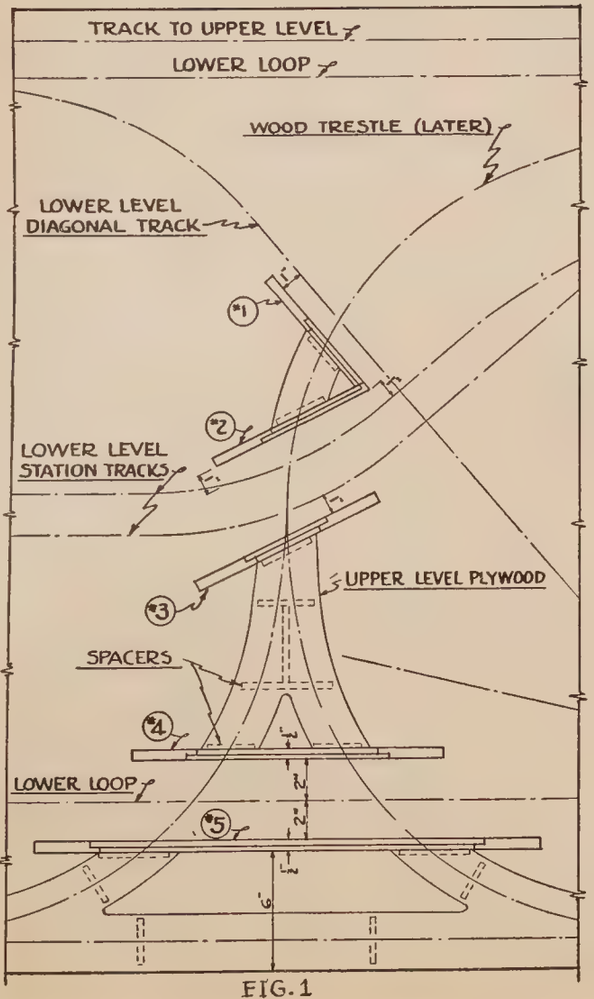


FIG. 1

FIG. 1 shows location of the 3 through girder bridges on legs of upper level wye. Dotted lines suggest location of spacers.

FIGS. 2-5, detailed view of the five abutments. For realistic effects, cover them to represent block masonry or cement.

FIG. 6 indicates girder construction. Girders must be tailor-fitted to your particular layout.

FIG. 7 shows how to install abutments. Note that track and track ties are supported by stringers, not by girders.

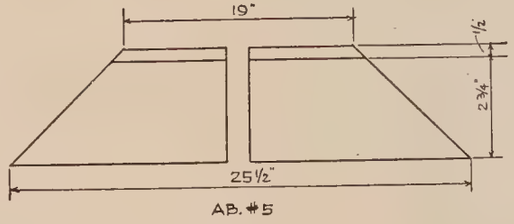
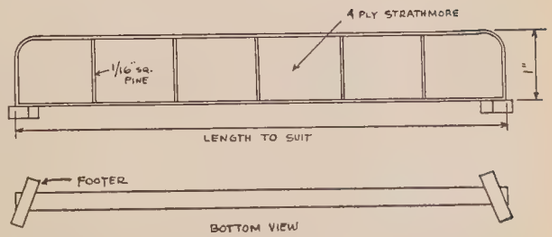
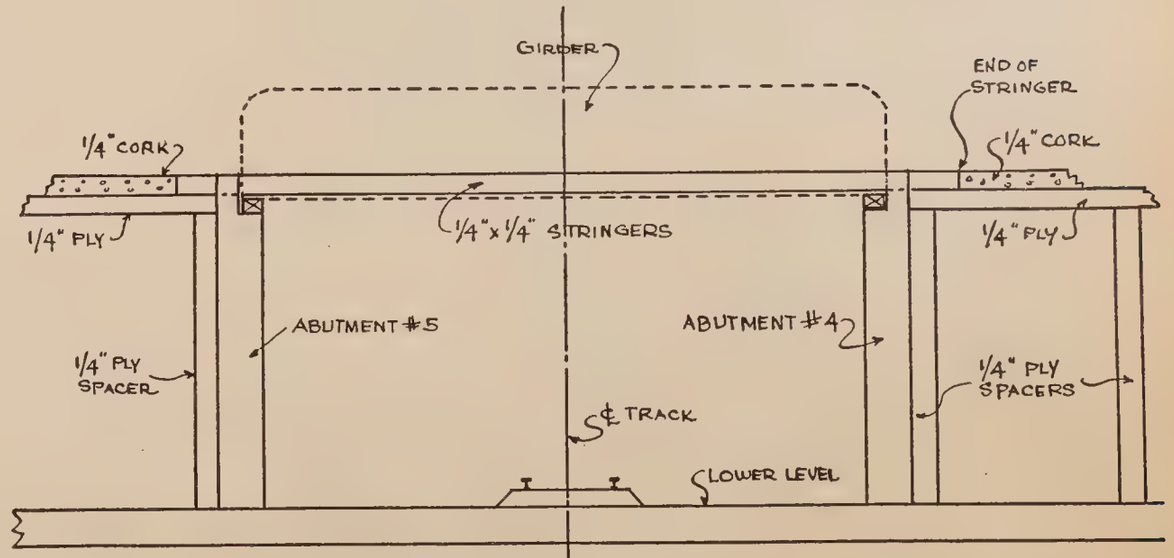


FIG. 5



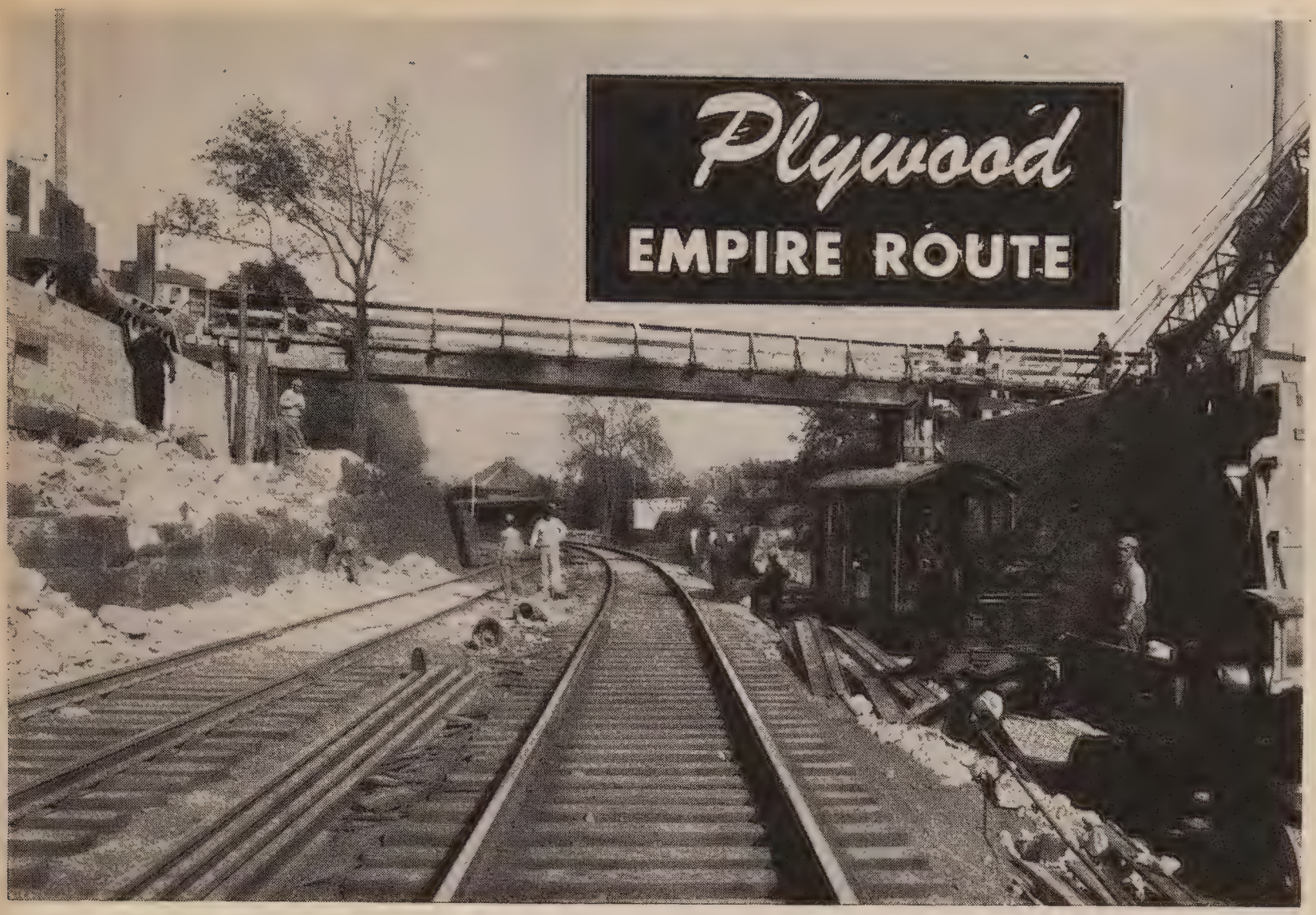
THROUGH GIRDER

FIG. 6



TYPICAL METHOD OF INSTALLING ABUTMENTS

FIG. 7



ABUTMENTS AND GIRDER BRIDGES

by PAUL N. WHITE

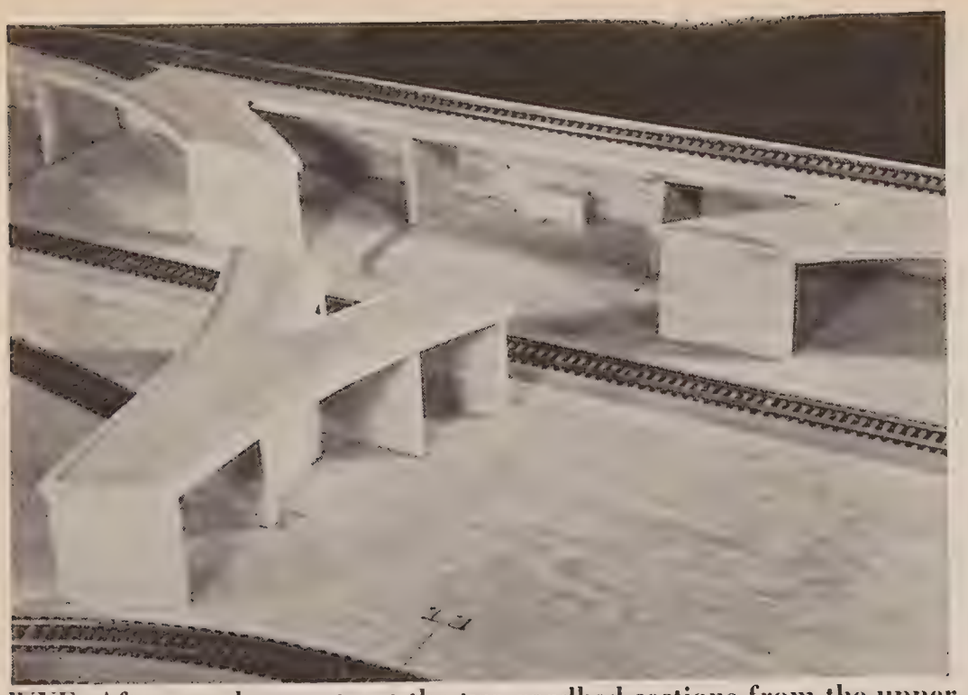
LACKAWANNA workmen in the picture above put the final touches on the abutments of a new bridge at Main Street in Boonton, New Jersey. Soon the street will leap across the new span, and the old wood and iron bridge in the background, its masonry retaining wall already partly gone, will see its last hours. In reduced scale, the same sort of operation goes on along the Plywood Empire Route.

Bridges on the Plywood Empire Route are not built strictly to prototype. They don't support the trackbed, and in that sense they are dummies. But this permits their quick removal when the dust cover is fastened to the top of the layout. Neither scale nor appearance, however, has been sacrificed. Of a number of different types of bridges along the Route, we will first consider the three through girder bridges. One is placed at the base of the upper level wye, and each of the others on its legs. See Fig. 1. We used plate girder bridges, but there is no reason why a more primitive type, like that in the picture above, for example, could not be used instead.

Before constructing the bridges, it will be necessary to cut out three openings adjacent to the wye on the upper level. With a sharp pencil, mark the location where the *five* abutments cross the plywood and cork ballast. Fig. 1. Note that all measurements are taken from the track center lines. These abutments are located so as to provide clearance for a 65-foot passenger car, the longest feasible on the Plywood Empire Route. Be certain there are enough 2¾-inch spacers to support the upper level. Suggested locations for these are given in Fig. 1. Carefully saw out portions of the upper level that are to be removed. Then install spacers flush with the ends of the upper level—they will rest adjacent to the abutments which come later. See Figs. 1 and 7.

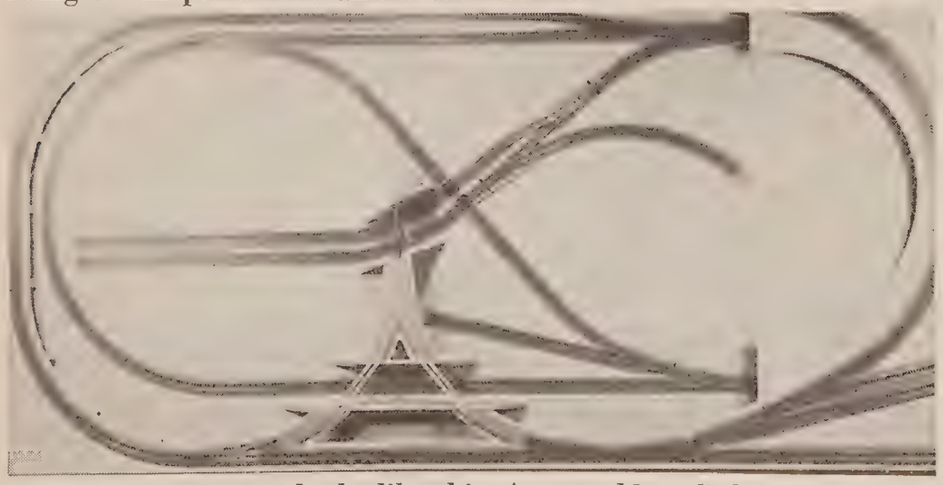
You will now have to make about six lineal feet of "abutment material" as shown in section in Fig. 2. If you have a circular saw, trim some waste wood down to ½-inch thickness and cut a ¼ x ½-inch rabbet on one side. If you don't have a power saw, glue two ¼-inch plywood strips together, making sure that one is ½-inch narrower than the other. Figs. 3, 4, and 5 give the necessary measurements for all five abutments. Cut the ¼-inch wide return-notch on the 76 degree sides of abutments Nos. 1 and 2. Install all abutments following Fig. 1 for dimensions. They can be glued to the lower level and adjoining spacers.

Before proceeding any farther, you should apply whatever "finish"



WYE. After you have cut out the two roadbed sections from the upper level, insert plywood blocks under each to give firm support. Minimum clearance rules out use of deck bridges.

DECK BEAMS in foreground will support your rail and ties. Retaining walls have been covered with "cut stone" building paper. Girders are being set in place over and beside tracks.



SO FAR your layout looks like this. A turntable will fill space at right, passenger station the loop at left. Sweeping curves and generous tangents occupy a 4 by 8 foot space.

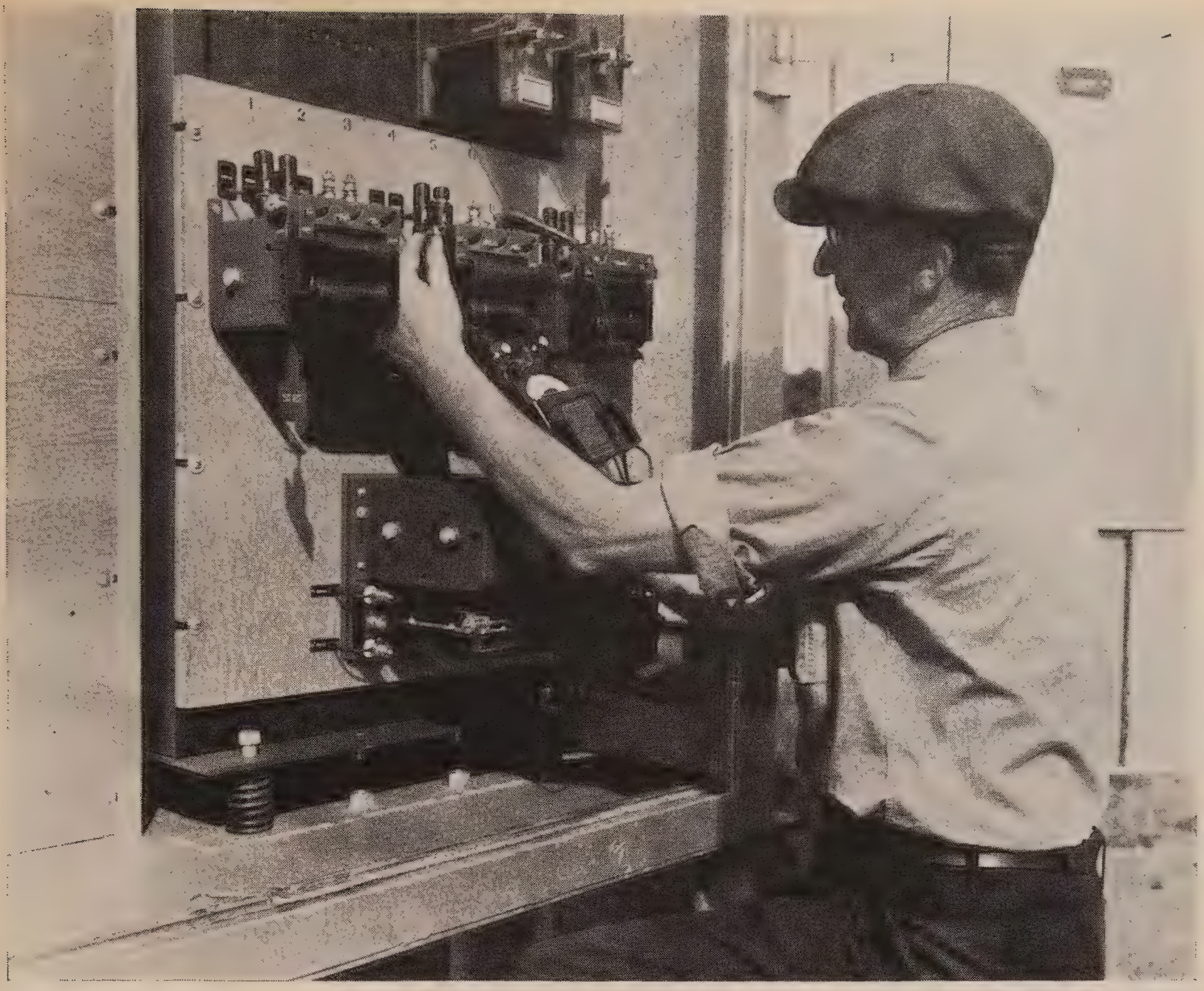
you've decided to use on the abutments. These can be painted gray to simulate cement, covered with brick or masonry paper, which is what we did, or, if you feel up to it, with a thin coating of Textone plaster (U.S. Gypsum Company) and scribed to represent large blocks of masonry. The ultimate in realism, by the way, would be obtained by cutting the ends of the abutments in "steps," instead of straight diagonals, to represent block masonry. Our masonry paper was secured with ordinary white library paste, which holds without staining. Note in Fig. 1 that abutments No. 1 and No. 2 join each other at one end.

At this point you can test all abutments for clearance, using your longest engine or passenger car. Everything should clear because our dimensions have been carefully worked out and *tested*.

In studying Fig. 7, you will discover that the track and track ties are supported by ¼-inch sq. false wood stringers and not by the girders themselves. No one will notice the difference, however, unless they are "experts" or keen observers. Thus, the girders merely rest on footers, which in turn rest on the abutments, and are quickly removed to be stored in boxes that should be numbered.

The easiest way to install the ¼-inch stringers is to proceed as follows. Taking the two skew bridges between abutments No. 4 and No. 5, lay a piece of pre-fab track of 18-inch radius on the roadbed, at each side of the opening, so that it lines up with the track centerlines. Next insert two ¼-inch sq. pine strips under the track, keeping them 5/16 inches apart, and move them carefully around until they give the curved section of the track proper support. Now remove the track and carefully mark where the ends of the stringers meet on the cork roadbed. Then with a razor blade, carefully cut notches out of the cork and similar ¼-inch notches in the tops of the abutments (use a Zona saw here). Go slowly so that you get a nice workmanlike job. Now the ¼-inch

(Continued on page 61)



General Railway Signal Co.

Skilled fingers adjust rectifiers in a signal case in centralized traffic control territory.

SIGNAL MAINTAINER

TRUE TALE by JOHN MATTHIAS

That Morning When 562 Blazed Red, I Knew Charley and I Were in for a Hard Day's Work

TWO FORTY-FIVE. The hands of my watch glow in the dark. The telephone rings again sharply, and I remember I'd been dreaming. I roll my legs over the edge of the bed, trying to shake the sleep from my eyes. The floor is icy under my bare feet. I stand there stupidly, hoping. But the phone rings again, and I fumble for the light. I hurry to pick up the phone now, though it seems foolish to hurry. I know it can only mean trouble, and trouble means I'm out of bed now for good.

"That you, Jon?"

Who else'd it be, I think, but I say, "Yeh," civilly, to the voice on the wire.

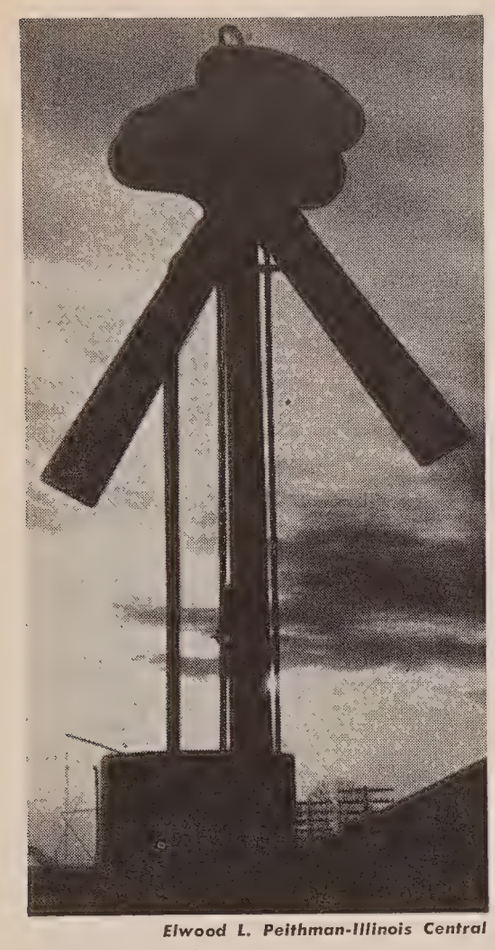
"Five-six-two signal, east bound, east of Harpster's standing red." The voice is excited. "One train's stopped already. The dispatcher says to get there right away and find out what the trouble is."

"Sure, sure," I say.

"Better dress warm," the voice says. "It's a pleasant twenty-six below and still snowing."

"Thanks."

"Cheer up," he says, "it's warmed up considerable. Yesterday out here



Elwood L. Peithman-Illinois Central

it went down to thirty-seven below."

I'm awake now. I already have a half-formed idea of what has to be done.

"Be right there," I tell him, "soon's I can get coffee, get dressed, get hold of Charley Mullholand."

"Hurry," he says and hangs up.

This is the way it begins, more or less, winter and summer. It was the way it began anyway the morning of January 18, 1953, when 562 signal stood red. No train can move past a red signal. There ought to have been a train in trouble on the track ahead. There wasn't, and it was up to me and Charley to find what was wrong with the signal and fix it.

Charles Mullholand and I both work for the Chesapeake & Ohio, Hocking Division. They list him on the time sheet as Signal-Maintainer Helper and me as Signal Maintainer. Our job is to maintain the color-light signal system and the highway crossing, and to protect the switches from damage. It's up to us to see that trains keep moving safely and on schedule at all times. Because extreme cold does crazy things to rails and electric signals, winter is our busiest time of year.

I live in Upper Sandusky, Ohio, where our headquarters is located. Charley lives in Harpster, eight miles south, within a mile of the reported trouble at 562 signal. But that morning I knew he'd have to come over to Upper Sandusky, before going to the signal, to give me a hand with the tools.

By the time I'd hung up the phone, my wife already had the water heating in the teakettle.

"Honey," I said, "fix me some coffee and a bowl of cereal while I'm dressing. Better fix my dinner pail too. About four ham sandwiches and a small jar of fruit." I'd decided by now that I wouldn't be able to get home before evening even though the day was only a few hours old. "And a container of coffee. I'll need it in weather like this."

I picked up the phone again and asked for 2101 at Harpster. My wife moaned a little. A long-distance call might take several minutes and deprive her of that much more rest. But after all these years she's pretty much used to getting up at all hours to get me moving when distress calls come. Two minutes later, after several insistent rings, a voice came through with a sleepy, "Hello."

"Is dot you, Charley?" I said. A radio comedian always used to say that before the television era, and I've never let Charley forget it.

"Yea, Jon?" he said suspiciously.

"Trouble at five-six-two signal," I told him. "Hate to have you drive clear up here, but the rails are slippery, and I'll need help with the motorcar and tools."

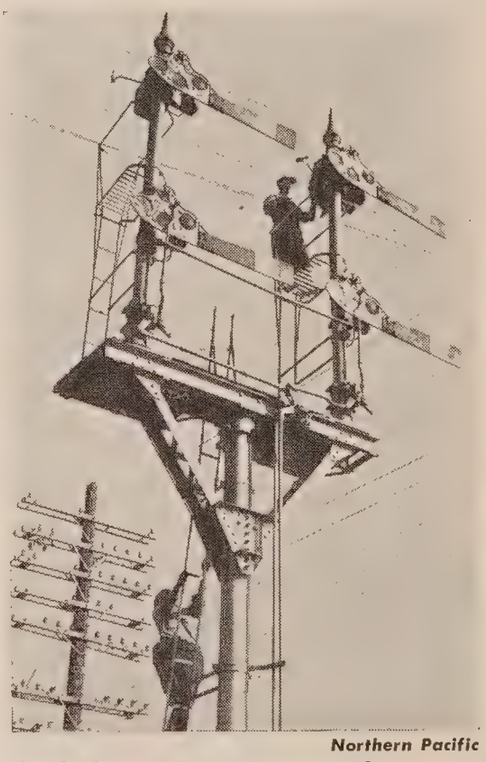
"Okay, Jon." His snappy reply let me know he was wide awake now.

In a matter of minutes I ate and dressed. On top of light underwear I put on a heavy sweat shirt and sweat pants like those athletes wear when they're warming up and then a summer-weight shirt and pants and a nylon flying suit. Over these came a light pair of overalls to keep the flying suit clean and, last of all, my greatcoat, a very heavy overall jacket. On my feet were a light pair of socks, loose work shoes, and four-buckle arctics. On my head was a heavy winter work cap. I had found from experience that in this get-up I could keep warm in the coldest weather and still move about freely.

I picked up my dinner pail, coffee container, and flashlight, kissed my wife goodbye, and went outside. Twenty-two minutes had elapsed since the phone call had roused me out of bed.

FORTUNATELY that old car of mine turned over like a top, even in all that cold, and in no time I was at headquarters, making mental notes of the tools we would need. Charley hadn't arrived. I had just poked up the fire, even though I knew I wouldn't be able to enjoy its warmth long, when Charley pulled in, stamping his feet to shake off the chill.

"Brrrr! It's sure cold this morning. Thought for a while I wouldn't make it. Snow's drifting across the roads. Hit a couple mean drifts on the way down." He was practically sitting on that old stove. "What extra tools you want?" he said after a moment.



Northern Pacific

ALOFT, a Northern Pacific maintainer checks signals mounted on a bracket pole near Marshall, Wash.

"Well," I said, "at this temperature there are two possibilities—broken line wires or broken rails. We better take a pair of wire pullers and clamps for bare wire and a hand drill for the rail if it's broken. And both our electric lanterns, I guess. I'll go up to the tower and get a lineup while you're loading up."

The tower, an old two-story oblong building about a third of a mile from our headquarters, is known as SA tower. The bottom floor houses signal equipment—relays, batteries, and wiring necessary for their operation; the second floor houses the operator's office and headquarters with its telephones and the levers that operate the derails, crossovers, and signals.

The day trick is presided over by the dean of the operators, Connie Clark, a veteran of fifty years service. Charles A. Kentfield, a much younger man, has the second trick, and Jim Evans, another young man, has the third.

Jim Evans was copying a telegram when I came in.

"Please give me a lineup east for motor car 1722 to MP 56," I told him when he glanced up.

Jim reached into a tiny cupboard atop the switchboard and got a form for the lineup. Pushing up the lever under the tab marked "C&O Dispatcher," and a foot lever downward so his voice would carry over the wire, he said into a phone, "SA tower. Lineup for motorcar 1722 east. Matthias, the maintainer—he's going to MP 56 to see what the trouble is."

While he waited, Jim filled in the lineup form. Under "location" he wrote *SA tower;* under date, *Wednesday, January 18, 1953;* and under "time," *3:28 a.m.* Then he added the initialed signature, *D.W.M., Chief Dispatcher.*

Finally the information he wanted began coming in over the phone, and under the word, "east," Jim wrote, *Extra 7002 called at Walbridge 7:30 a.m.,* and then under that, *Void at 4:30 a.m., repeated by Matthias.* Looking up at me a second, he waited for me to repeat what he had written. This had to be done according to the rules of both the C&O and the Interstate Commerce Commission.

"And by the way," Jim said, "the dispatcher says he'll hold everything going east here and not put anything over the eastbound coming west until he hears from you."

Back at headquarters Charley and I pushed the motor car out of the building and onto the track. It was still dark, but there was a streetlamp nearby. Charley handed me the crank to start the motor, and I turned it much as you would wind up an old-fashioned clock. I had trouble at first, but then the motor came to life. I settled down in the seat on my side of the car, and we were on our way.

Out in the country away from the streetlights, the western sky looked dark and forbidding, but toward the south there was a murky swirl of light. We were about five miles from town when the moon came out from behind the clouds. It was a wonderful sight from an open and speeding motor car. Ahead on the newly fallen snow, the moonlight, dancing over the tiny snow crystals, made the land look like a vast field of blue-white diamonds. The snow had drifted against the lower part of the fences among the weeds and seedling trees to form miniature white castles and milk-white hills, and the flake-filled gusts swirled in and around them.

We were coming over the top of a hill now, and some two miles ahead was 562 signal showing red, like a traffic light, only much brighter—maybe more like the tail of a comet.

"She's red all right," Charley yelled, trying to make himself heard over the roar of the motor.

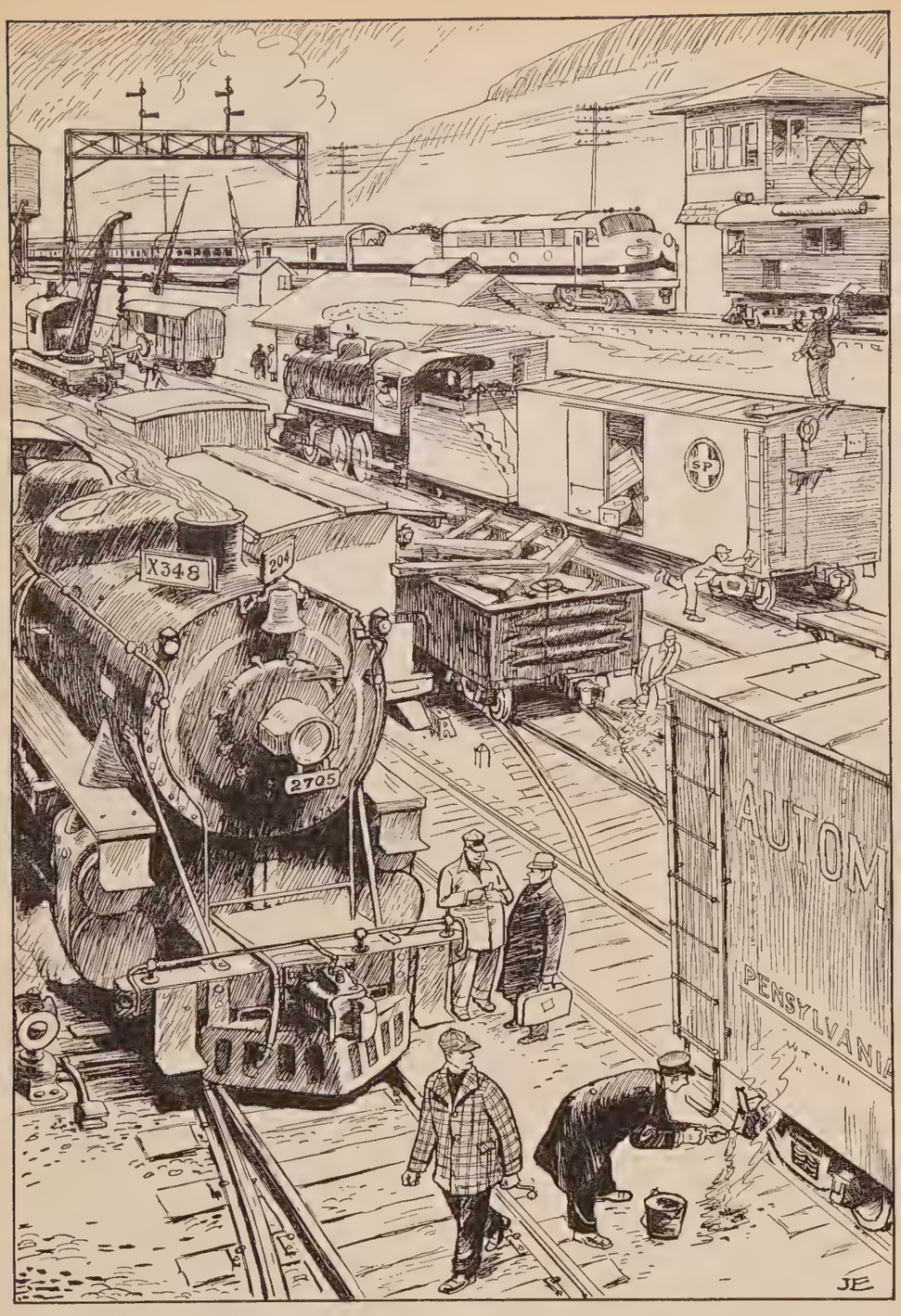
"Sure is," I called back. "As Snuffy Smith of the Sunday comics would say, As red as the mawnin' sunball."

Charley stopped the car at 562

SENTINEL-LIKE, this Illinois Central automatic block signal stands as a symbol of railway progress. The late John R. Cahoon, Memphis Division signal maintainer, is shown checking the lights.

Illinois Central Railroad

signal, and I took a direct-current volt meter from its sponge-rubber nest inside the meter box. This meter is used to read direct current—the type that emanates from an automobile storage battery. I checked the time on my watch.



How Many Mistakes Can You Find in this Picture?

"Better get one of the electric lanterns," I told Charley even though the moonlight was still almost as bright as day. The hands of the meter are silvery and hard to see except in a bright light.

I took the two leads of the meter —the leads are pieces of No. 18 wire, rubber covered—and put them on the rail of the circuit affected. It should have shown half a volt on the meter, but I got no response. I knew I was in the trouble zone.

"Give me the light, Charley. I'll go ahead a few rail lengths and check while you stay by the car."

I had not gone more than three and a half rail lengths—about 135 feet, touching the meter leads to the rail occasionally, before I found I had a full volt and a half. Voltage that has built up beyond its normal flow on a track circuit indicates that the circuit is open. I retraced my steps and again checked the meter. As I straightened my lantern to read the meter, the light flashed momentarily on the rail, and there before me I saw the break.

"Found it!" I shouted to Charley.

AT THE SIDE of the track, I opened the case housing the relays and the batteries that operate the signal, took a socket wrench from my pocket, and, as required by C&O and ICC regulations, removed the track relay coil wire.

The electrically operated relays and circuits are the heart and nerve system of a railway signal network. A track circuit, operating on a comparatively weak current, consists of a relay and a battery, separated by the rail, which acts as a conductor.

Each signal is controlled by at least two relays: a track relay, operating on roughly half a volt of direct current, and a line relay, operating on ten volts, D. C. Each relay consists of wire coiled around a core of soft iron, which, while an electrical current is passing through the coil, becomes sufficiently magnetized to attract another soft iron piece and thereby establish a closed circuit. If the current is too weak, or if there is none at all, the iron piece falls back from the iron core, and the circuit is open. Unlike the track relay, the line relay has a permanent magnet.

Whenever a train passes a signal, it enters the signal circuit, and its metal wheels short the track current, demagnetizing the track relay and opening the circuit. This causes the line relay and current to switch from the green signal light to the red. When the train passes out of the immediate vicinity of the signal circuit, the line relay switches the signal light to yellow, and, as the train passes the next signal and the open track relay closes again, the green light is switched on again.

Each track relay, then, is essentially an intervening device equipped with contacts to open or close a second current, and the lights make the changes from green, to yellow, to red, according to the changes in the track and line currents. Thus, at 562 signal, since the rail was broken and the circuit open, the loss of current in the coils caused the movable part of the relay to lose its contact, which under normal conditions—that is, when a train is not passing—would hold the signal to green. But the red signal seemed to indicate a train in trouble between there and the next signal. By removing the coil wire from the

Research that's worth $100,000,000 a year

A recent report of the research activities of the Association of American Railroads shows that just 55 research projects are producing savings in railroad operating costs of $100,000,000 annually. Since most of the projects were started in the 1940's, savings accumulated throughout their lifetime are estimated at approximately $1,000,000,000.

Savings such as these are the best evidence of the value of railroad research. Yet, significant as these savings are, they represent only a fragment of the railroad research picture. For the 55 projects studied did not include much A.A.R. research in other fields. Nor was any account taken of economies effected by the research of individual railroads and of railroad equipment and supply manufacturers.

The combined efforts of so many have enormous effect. Research results show up in more efficient locomotives, in smoother-riding cars, in stronger track, in machines that perform maintenance work with dispatch and economy, and in ingenious traffic control devices that are helping speed trains past new milestones of safety and operating efficiency.

While research has been laying the foundation for improvements, the investment since World War II of more than $9,000,000,000 of railroad money has been building up the physical structure of modern railroading. Into this structure there have gone during this period almost 20,000 new diesel locomotive units, 550,000 new freight cars, scores of improved yards and terminals, 15,000 track-miles of centralized traffic control, and other thousands of miles of strengthened and straightened track—to mention just some of the many things it takes to run today's railroads at today's stepped-up pace.

Under the guidance of alert, progressive management, investment has truly teamed up with research to produce ever better railroads.

ASSOCIATION OF AMERICAN RAILROADS
WASHINGTON 6, D. C.

track relay, I eliminated any chance of the relay receiving any current from the track and showing a green signal.

The C&O uses a color light system for its signaling indications. Mounted vertically on a pole are three lights. Green, the bottom unit, tells the engineer of an oncoming train that the track ahead is clear; yellow, in the center, that he must proceed with caution; and red, that he must come to a complete stop.

Having found the trouble and removed any chance of the signal going green, we went back to Harpster and set the motor car off the tracks. Charley set off to wake up the Harpster section foreman, Herb Carver, and have him get his men out, while I went to the telephone inside the freight house to call Jim Evans. It was just four-thirty.

"Jim," I told him, "we found the trouble. A broken rail. The track can't be used until a new one is installed."

"Just a minute, I'll tell the dispatcher," he said. "You better hang on. He may have something to tell you or want more information."

In a moment, Jim was back on the phone again.

"A westbound train'll go by you in about twenty minutes. Otherwise traffic shouldn't bother you. There won't be anything more until about ten o'clock. Let me know as soon as you get it fixed."

Charley came back with the key to the station waiting room. Harpster station is open for only one trick, from eight in the morning till five in the evening. We went inside and Charley got the fire going while I brought in my coffee and our dinner pails. The coffee was still warm, but I took the can out of its container, slid the lid off, and put it on the stove. Soon it was steaming hot and the aroma of coffee filled the room. This gave me an appetite, so I put two of my ham sandwiches on the stove to warm. With the coffee and sandwiches under my belt, I knew I could last until noon.

By this time, Herb and his crew were ready to go. They had loaded a rail on a push car tied to the rear end of their motor car. We put our car on the tracks in back of him, keeping about a thousand feet behind.

About halfway between Harpster and 562 signal, the westbound Jim Evans had warned me about went through. On the train, a carload of lumber had broken the bindings that held it secure. A big plank hung over the edge of one of the cars; then, just as the car passed, I heard a rumble behind us. Two huge planks had fallen off and lay, broken and shattered, all over the tracks.

"Wow, that was a close one," Charley said. "I hate to think where we'd be if they'd hit us."

Charley brought the car to a stop and we walked back to toss the lumber off the tracks. There was nothing to do now but go ahead and tell Herb what had happened and then back up to Harpster and call Jim Evans at Upper Sandusky so that the train with the broken bindings could be stopped. Jim stopped the train all right.

"The dispatcher wants me to get Lem Hughes' section force out there," he told me, "and let them patrol the eastbound track from Upper Sandusky to Harpster to see if there are any more planks lying across the tracks. How they doing with that rail down there?"

When Charley and I got back to 562 signal, Herb's men had already rolled out the broken rail and put the new one in. It was light enough now for Herb, Charley, and me to examine the break in the old rail.

"Looks like a fissure," Herb said.

"What causes fissures?" Charley said. "The rail get old?"

"No. This rail is comparatively new," Herb told him. "A fissure's caused by a poor mixture of carbon, sulphur, phosphorus, and other elements in the ingots before they are milled into rail. This is a hundred and thirty-two pound rail. That means that for each lineal yard of rail there's a hundred and thirty-two pounds of steel."

When Herb's men finished their part of the work, Charley and I drilled a three-eighths-inch hole in each end of the new rail, close to the end of the joints. We pushed a band of wire behind the joint. Each end of this wire has a tapered pin pressed into it. When this is driven into the three-eighths-inch hole, it fits tight and makes a good connection. We only had to drill two holes because we knocked the old pins out of the other rails with a special punch. I put the lead back on the relay, checked it with my volt meter. It read half a volt. Five-six-two signal now showed green.

WHEN we returned to Harpster, station agent and operator Al Hulbert was now on duty. Herb told him the track was ready for use, and Al notified the dispatcher. The dispatcher said Charley and I should go back to Upper Sandusky immediately to repair a line wire hanging across Johnson Street, near our headquarters.

By ten, we'd finished repairing the line, and I made out the necessary reports while Charley busied himself doing little jobs around headquarters. We transferred a quantity of material from the freighthouse across the tracks, and the time consumed checking, storing, and receipting brought us right up to dinner time, 11:30 A.M.

While we were eating, Charley wondered why some insurance rates were higher for railroad men than for other classes of workmen. I told him an insurance man had told me once that all railroad workers whose jobs kept them along the tracks, near the trains, came under the category of dangerous occupations. Our own job involved the danger of climbing icy poles, of high tension wires falling on telegraph wires or tracks during a sleet or wind storm, of being knocked into tomorrow by flying timers—as had nearly happened to us that morning. Signal Maintainers hardly have a safe occupation. But strict adherence to safety rules have eliminated quite a few accidents.

We had barely finished eating when Connie Clark, now on duty, called to tell me extra 7019 east had just thrown off a note saying the green indication light on 673 signal was broken out. Soon we were on

our way and in twenty minutes arrived at the damaged signal. We had a little trouble there. We had to work with our bare hands, and, even though the mercury had climbed to twenty above, the cold was still biting. However, we finished the job and were back at headquarters by four o'clock.

While I made out the report, Charley came into the office and sat down wearily. I was marking our time on the time-sheet. On the C&O in addition to our time-sheet, we have another sheet called a Time Distribution Sheet. When maintainers are in doubt about what to charge their time, they say, "Just charge it to J. F. A." I knew Charley had never heard the saying before, so I said to him, "What should I charge our time to—J. F. A.?"

"What's that mean?" he asked wearily.

"Just fooling around," I said.

"You can call it that if you want to, but I have another name for it."

I looked at the clock on the wall. It was four-thirty.

"Good night, Charley," I said. "See you tomorrow morning."

Next Month's Waybill

RAILS ACROSS THE GREAT LAKES, lead feature by Freeman Hubbard—exciting days and nights on the trainferries—dramatic history — operational facts — plenty of good photos—and a map.

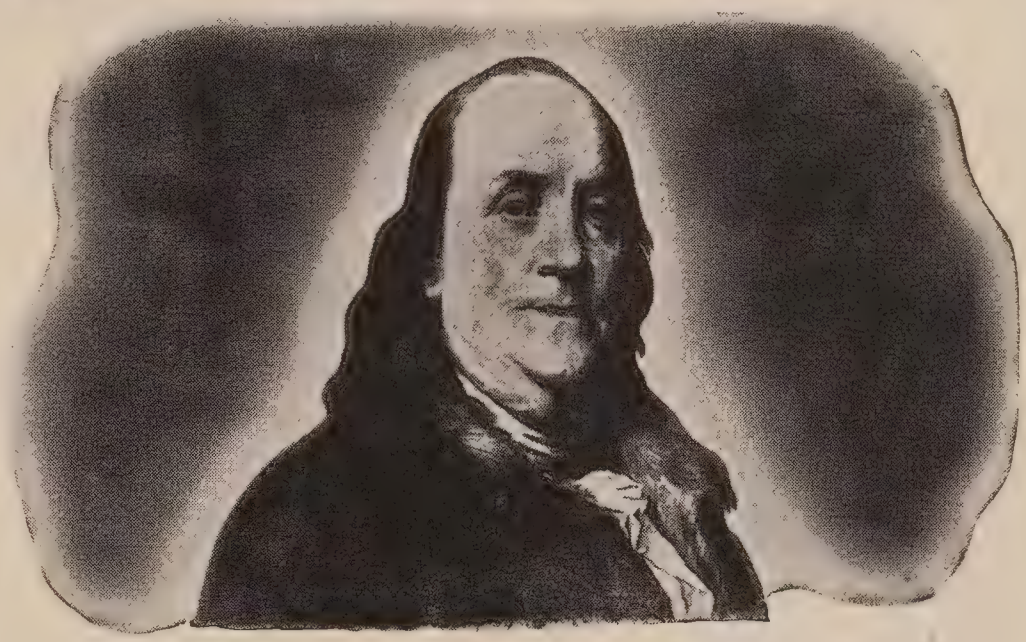
CASEY JONES TOLD ME TO JUMP, illustrated true tale by Sim Webb, now an old retired fireman living in Memphis—his own uncensored version of the controversial "trip to the Promised Land."

TRACKSIDE GRAVE, fiction by a great story-teller, Jack McLarn.

KEEPING ENGINE WHEELS IN PRECISION TRIM, by Ted Wallace, author of many technical write-ups.

PLUS a full consist of other tales, fact articles, departments, a locomotive roster of the Algoma Central & Hudson Bay, and some more high-quality Photos of the Month.

WHAT SECRET POWER DID THIS MAN POSSESS?



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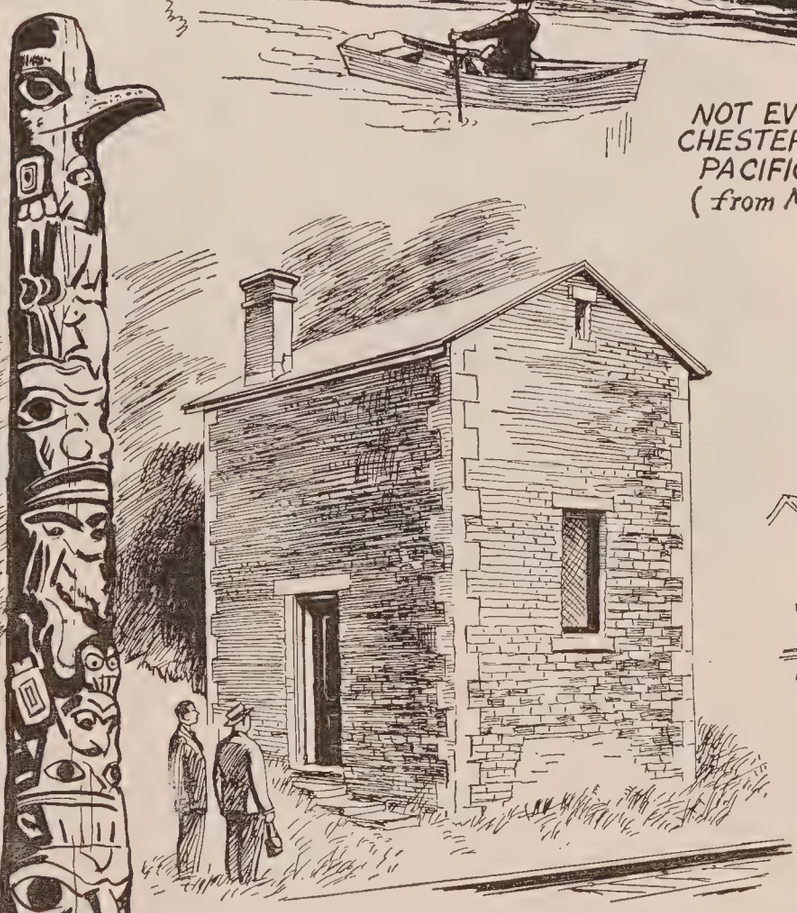
ALONG THE IRON PIKE

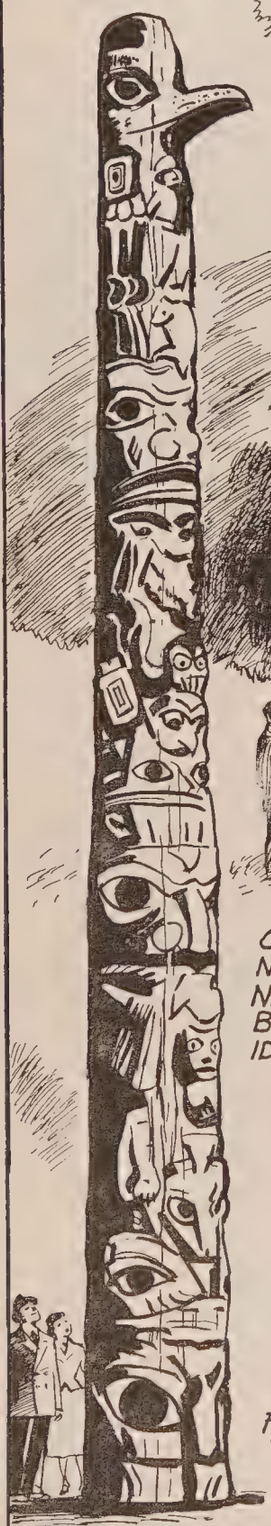
by JOE EASLEY

NOT EVEN A FLOOD 34 NICHES DEEP NEAR CHESTER, ILL., COULD STOP THE MISSOURI PACIFIC'S ST. LOUIS LOCAL IN APRIL, 1922. (from MP Lines Magazine)

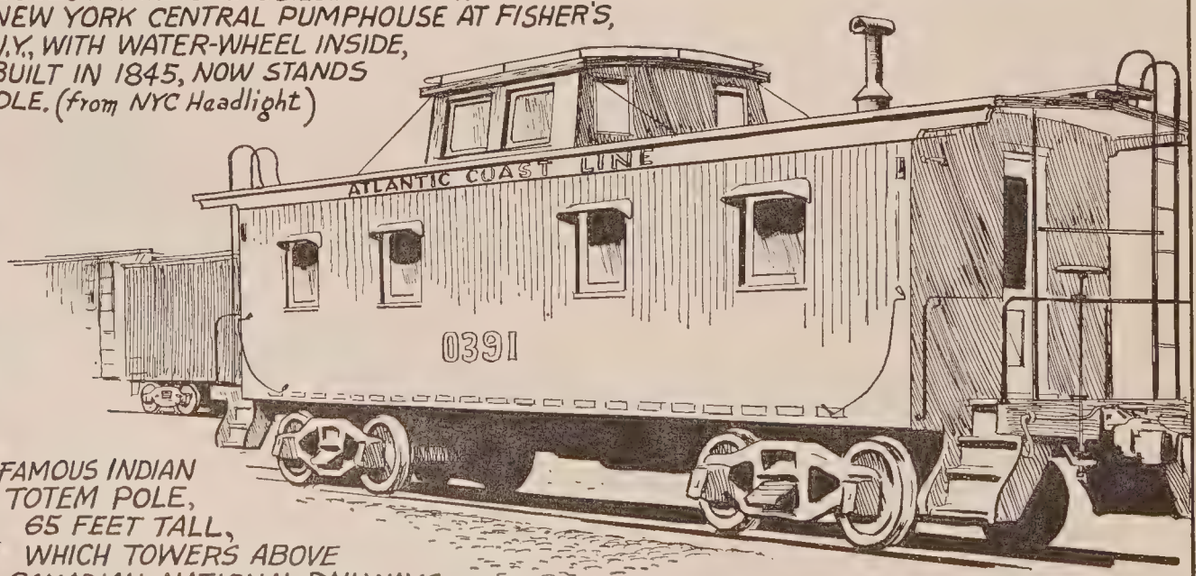


OLDEST RAILROAD BUILDING IN U.S.? NEW YORK CENTRAL PUMPHOUSE AT FISHER'S, N.Y., WITH WATER-WHEEL INSIDE, BUILT IN 1845, NOW STANDS IDLE. (from NYC Headlight)

WESTERN MARYLAND'S NEW EMBLEM, DESIGNED BY PRESIDENT W.A. GROTZ FOR FREIGHT CARS, IS NOW BEING APPLIED TO DIESELS ALSO. (from Railway Age)



FAMOUS INDIAN TOTEM POLE, 65 FEET TALL, WHICH TOWERS ABOVE CANADIAN NATIONAL RAILWAYS STATION AT JASPER, ALTA., WAS RECENTLY GIVEN A REAL CLEANING. (From Canadian National Magazine)



ATLANTIC COAST LINE CABOOSE WITH AWNINGS WAS USED FOR 28 YEARS BY CONDUCTOR T.A. CLOUD, LAKELAND, FLA., NOW RETIRED. (from ACL News)

ALASKA RAILROADING

(Continued from page 38)

construction men peeled back the thin layer of soil blanketing the eight-mile canyon, permafrost centuries old began to thaw. The mountain began creeping down into the canyon, carrying the railroad along with it.

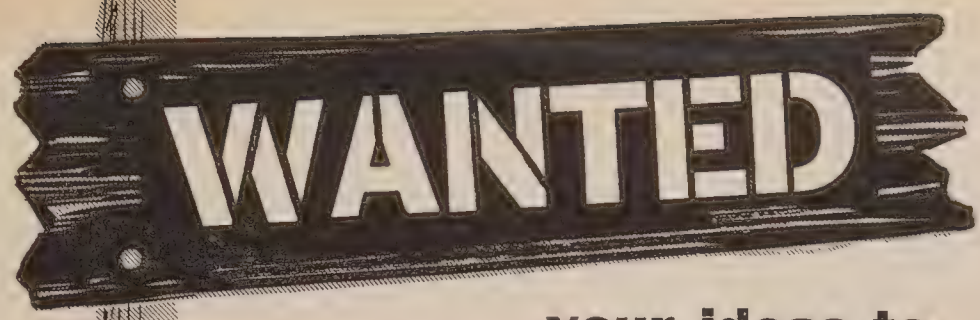
Engineers now estimate that three million cubic yards of mountain are on the move, but so far every attempt to stop it has failed.

Almost as pressing a problem are the moose. The great beasts catch their legs between the ties on the bridges, so that the railroad had to cover the holes with aluminum sheeting. During the winter months, when the deep snows leave them at the mercy of the voracious Arctic wolves, the moose take to the snow-free ARR tracks rather than break through drifts. Coaxing twelve hundred pounds of moose off the right-of-way is no easy task. The railroad has tried everything—oscillating lights, high-pitched whistles and sirens, hot steam, fusees, rocket pistols, even pots of scalding coffee from the diner. Nothing seems to do any good.

When one engineer tried to drive a moose from the tracks with snowballs, the stubborn bull charged the diesel and broke his neck. Some theorists have suggested that diesel-charging horned beasts mistake the diesels for their natural enemy, the Arctic wolf.

In any case, the faster the ARR gets, the more moose die. In one season recently, 320 lost their lives. But at least they have not died in vain. Train crews immediately dress the meat and give it to the Fish and Wildlife Service to distribute to charitable groups.

With troubles like these waiting around every curve, no wonder hoggers complain, "You catch up in one season and you get hit by the next." But it's an exciting, adventurous route. You might even call it the ruggedest railroad in the world. No wonder, either, that hoggers also say, when they finally have to retire, "It was a good place to spend a lifetime." ●



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Number of children in family _____ Number of adults in family _____

Own Home_____ Rent Home _____ Last grade of school attended_____

Own Radio_____ Own TV Set _____

Books of the Rails

WORLD RAILWAYS 1952-53: A Survey of the Operation and Equipment of Representative Railroad Systems. Rand, McNally & Co., Chicago. 550 pages. $25.00.

PROBABLY the most comprehensive railroad reference book ever published, this volume contains detailed information about 1447 railways in 101 countries, supplemented by 125 maps, 594 photographs of steam, diesel and electric locomotives, freight and passenger cars and other rolling stock, as well as 256 diagrams.

The entries are arranged geographically according to individual companies, and under each you'll find, perhaps, a note about the company's history and route, its emblem, then details about trackage—its length and construction, gradient, curvature, longest continuous grade, and so on. Latest annual returns of both freight and passenger movement are listed; also the type of train control and signaling used, the number of units of equipment, and other rolling stock details.

A brief introductory essay summarizes recent railroad developments the world over during the past few years. In short, an indispensable addition to your railroad library. What was that you wanted to know about the Kowloon-Canton line in Hong Kong?

RAILWAY ADVENTURE, by L. T. C. Rolt; Constable & Co., Ltd., 10 Orange St., London, W. C. 2, England; 176 pages, 21 shillings.

FROM THE BEGINNING the Talyllyn Railway in Wales has been an eccentric line, and so nobody was much surprised when, after World War II, the Labor Government forgot to nationalize her, and trains continued to chug happily along the seven miles of track that link Towyn with Abergynolwyn. Then as a result of the death of her owner, Sir Haydn Jones, in 1950, the 85-year-old narrow-gage (27 inches) was threatened with abandonment. A group of railfans set about to preserve the Talyllyn without destroying her tradition of service to the region through which she runs.

Deciding to operate the road themselves, the amateurs had their problems. The engines ran out of water, lost their footing on the slippery rails, and jumped the track at frequent intervals. Flanges cracked and broke, springs disintegrated, and mud made the track impassable. But somehow the trains kept running. *Railway Adventure* is the story of this project, including a history of the line and descriptions of its route, its rolling stock and its operational problems.

In this affectionate history, Talyllyn's locomotives—*Dolgoch, Sir Hadyn,* and *Edward Thomas*—take on remarkably distinct personalities. But the railfans and the local people who fought to save the railway do not seem very real. There's a certain irony in this because Mr. Rolt, who was one of the men who saved the Talyllyn, insists on seeing the road as a symbol of stubborn individualism holding its own in a totalitarian and mechanized age.

THE FASTEST HOUND DOG IN THE STATE OF MAINE, by John Gould; William Morrow & Co., New York; 94 pages, $1.95.

"A GOOD MANY TIMES people have asked me how I came to own the fastest hound dog in the State of Maine, and why he was known to be the fastest, and I want to tell it just the way it happened so you'll know all the facts."

Thus begins John Gould's amusing yarn about a State of Mainer and his hound dog who got mixed up in a pursuit race with the Bangor & Aroostoock. A series of notes, some of them funnier even than the main story, round off the rough edges. The book is dedicated to the BAR, and the story couldn't have happened without it, though "the rugged railroaders who operate this northerly line have probably never regarded this story as highly complimentary." Credit for half the fun goes to F. Wenderoth Saunders' hilarious sketches.

ONE WAY TO ELDORADO. By Hollister Noble. Doubleday & Co., Inc., New York, 286 pages. $3.50.

AS A NOVEL, *One Way to Eldorado,* is fairly absurd. It has something to do with an amateur painter and trouble shooter on a big Western railroad who can't make up his mind whether to stick with the high iron or high art. There's some implausible derring-do involving a couple of shady ladies, a big-time gambler, the Comstock Lode, and the most unlikely Great Train Robbery since Andrews stole the *General.*

But the real drama concerns a mountain railroad caught in the grip of a heavy snowstorm. Mr. Noble knows his railroads, and he writes well and vividly about them.

RAILROAD LEADERS 1845-1890: The Business Mind in Action. By Thomas C. Cochran. Harvard University Press, Cambridge, Mass. 564 pages. $7.50.

THE MEN who ran the railroads during the latter part of the 19th Century were a fairly heterogeneous group. At one extreme were executives like John Murray Forbes, of whom Emerson wrote: "He is not likely in any company to meet a man superior to himself. I think this is a good country that can bear such a creature." At the other were the "robber barons"—"buyers of legislatures, makers of presidents, controllers of education, debasers of religion, engrossers of the public domain, and swindlers of investors." Mr. Cochran, on the basis of the correspondence of some sixty railroad executives, none of them "robber barons," analyzes the social roles these men assumed and their ideas about practically everything —from where churches ought to be built to the ideal relation between a company and its employes.

PIEDMONT PRODIGY: The Story of the Piedmont & Northern Railway. By Thomas G. Lynch. Piedmont & Northern Railway, Charlotte, N. C. Illustrated. 28 pages. Paperbound. Free.

A SHORT INFORMATIVE HISTORY from the P&N's early days to the dissolution of the common management plan with the Durham & Southern last spring. James B. Duke's interurban electric sprang from a dream of public service. Though government control during World War I nearly destroyed the two-part line, and, like most interurbans, it lost its passenger traffic to the automobile and promptly dieselized, its motto, "A Mill to the Mile," and this little book are signs of its ultimate prosperity.

BIBLIOGRAPHY OF RAILROAD LITERATURE, compiled by Association of American Railroads. Transportation Bldg., Washington 6, D. C., 56 pages, illustrated.

REVISED booklet lists juvenile railroad books, general railroad literature, model railroading, statistics, railroad periodicals, including company house organs, and publishers' addresses. Copy sent free to anyone, on request, as long as supply lasts.

PLYWOOD EMPIRE

(Continued from page 50)

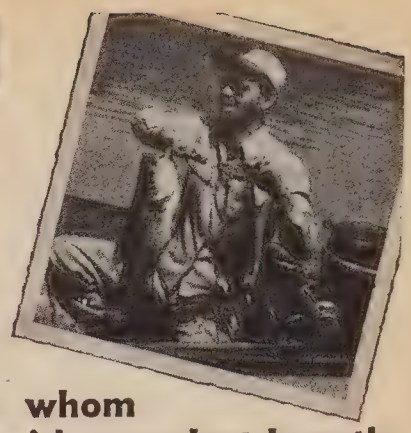
strips should rest snugly in place, level with the cork roadbed. Follow the same procedure with the adjoining skew bridge and the bridge between abutments No. 2 and No. 3, remembering that with the latter this bridge supports part of the wye switch and should be taken into consideration when positioning your track and stringers.

When all six stringers are in place, you are ready to build and install the plate girder bridges. No dimensions have been given for *length* of girders because these will have to be carefully measured on the job to get a tailored-made fit. Using two lengths of heavy cardboard, ¼ inches wide, determine the actual length of each span. You do this by propping them temporarily into position (be sure to keep each parallel to the other) and move them in or away from the track until your longest car has ample clearance. This gives you the correct length for each girder.

Construct girders as shown in Fig. 6, using a 4-ply Strathmore drawing board for the webs and a 2-ply board for the flanging on the edges. The vertical angle members are made of 1/16-inch sq. pine. Cement footers, made of 3/16-inch sq. pine, under each end of the girders, skewing them so they line up with the edges of the abutments. Finally, set all girders in place and mark the centers of the footers, where they rest on the abutments, with a pencil mark. Make dowel pins by driving ½" No. 20 brads half-way in and snipping heads off with cutters. When all four pins on each bridge are in place, rest girders lightly on the pins so that they leave faint register marks on the underside of the footers. Drill No. 64 holes at marks so that bridge girders can be lowered into place. They will stay firmly in position and can be removed by lifting up.

This completes the three girder bridges. Next month we will cover switch machine installation, both the electrical and "hand-thrown" variety. Don't miss it! ●

Bass Fishermen will Say I'm Crazy . . . *until they try my method!*



But, after a 10 day trial, if you're at all like the few other men to whom I've told my secret, you'll guard it with your last breath.

Don't jump at conclusions. I'm not a manufacturer of any fancy new lure. I have no rods or lines to sell. I'm a lawyer and make a good living in my profession. But my all absorbing hobby is fishing. And, quite by accident, I've discovered how to go to waters that everyone else says are fished out and come in with a limit catch of the biggest bass you ever saw. The savage old bass that got so big, because they were "wise" to every ordinary way of fishing.

This METHOD is NOT spinning, trolling, casting, flyfishing, trot line fishing, set line fishing, hand line fishing, live bait fishing, jugging, netting, trapping or seining, and does not even faintly resemble any of these standard methods of fishing, No live bait or prepared bait is used. You can carry all of the equipment you need in one hand.

The whole secret can be learned in twenty minutes—twenty minutes of fascinating reading. All the extra equipment you need, you can buy locally at a cost of less than a dollar. Yet with it, you can come in after an hour or two of the greatest excitement of your life, with a stringer full. Not one or two miserable 12 or 14 inch oversized keepers—but five or six real beauties with real poundage behind them. The kind that don't need a word of explanation of the professional skill of the man who caught them. Absolutely legal, too—in every state.

This amazing method was developed by a little group of professional fishermen. Though they are public guides, they never divulge their secret to their patrons. They use it only when fishing for their own tables. No man on your waters has ever **seen it, ever heard of it, or ever used it.** And when you have given it the first trial, you will be as close mouthed as a man who has suddenly discovered a gold mine. Because with this secret you can fish within a hundred feet of the best fishermen in the county and pull in ferocious big ones while he comes home empty handed. No special skill is required. The secret is just as deadly in the hands of a novice as in the hands of an old timer.

My secret will be disclosed only to a few men in each area—men who will give me their word of honor not to give the secret to anyone else.

Send me your name. Let me tell you how you can try out the secret method of bringing in big bass from your "fished out" waters. Let me tell you why I let you try my method for 10 days without risking a penny of your money on instructions or lures.

There is no charge for this information, now or at any other time. Just your name is all I need. But I guarantee that the information I send you will make you a complete skeptic—until once you try it. And then, your own catches will fill you with disbelief. Send your name, today. This will be fun.

ERIC X. FARE

317 S. Milwaukee Ave., Libertyville, Illinois

ERIC X. FARE, 317 S. Milwaukee Ave. Libertyville, Illinois

Dear Mr. Fare: Send me complete information without any charge and without the slightest obligation. Tell me how I can learn the secret method of catching big bass from "fished out" waters, even when the old timers are reporting, "No Luck."

Name.....

Address.....

City.....*Zone*....*State*.....

AMAZING THING! By Cooper
SENSATIONAL NEW TING CREAM FOR FOOT ITCH (ATHLETE'S FOOT) - REGULAR USE HELPS RELIEVE ITCHING - SOOTHES BURNING BETWEEN CRACKED PEELING TOES - AIDS HEALING AMAZINGLY!
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MAIL CAR

(Continued from page 9)

NEWS ITEMS. Union Pacific will no longer charge extra fare on any of its trains. The last holdout, the *City of San Francisco* streamliner, has just dropped extra fare on the UP-C&NW portion of its run, between Chicago and Ogden, Utah.

The Rock Island recently put into service its largest freight car, a 58-foot-long flatcar with a 21-foot depression which allows it to carry exceptionally high and heavy loads. Built at the company's Blue Island shops, it has a 125-ton capacity, weighs 125,000 pounds, and boasts six-wheel trucks at each end.

A fact you won't find in either of Dr. Kinsey's best-sellers is that diesel horns on Canadian and Alaskan railways are disturbing the moose's love life. It is officially reported that the bull moose sometimes mistakes the sound of the compressed-air horn for the mating *moo* of a lovelorn moose cow and in some cases his effort to respond has been fatal.

Austrian Railways have just opened a waiting room for teen-agers at Innsbruck's Central Station. This is an experiment. Students waiting for trains may use the new room to do their homework, read the books in a specially installed library, or play games.

Back in 1914, the six-mile Waterville Railway running between Waterville and Douglas, Wash., owed no money, had no watered stock, and was regularly paying a 4 percent dividend. Its principal freight was wheat. The line prospered until 1948, when floods dealt it a staggering blow. Today, with ICC approval, the line is extinct, laments Walter Thayer, Box 1588, Chelan, Wash. The reason for abandonment was explained in three words, "No more business."

Maine Central's 92 years of continuous steam operation ended a few weeks ago with a final run by a special train from Portland to Bangor and back, reports Gerald O. Boothby, 19 Melbourne St., Portland 3, Me. The road's last steamer, No. 470, was given a new paint job for the graveyard run. Instead of being scrapped, she is being preserved as a lasting memorial of the days when steam was king. ●

NON-RAILROADER Harry B. Chase, 18 Beech St., Mansfield, Mass., writes: "I like inside dope, even though it may be routine stuff for railroaders, such as short technical articles on handling locomotives, airbrakes, braking and switching jobs, and so on. I always read the *Information Booth* first. Joe Easley's cartoons, 'Not on the Wheel Report,' are the best in their field. The more soot-and-cinders and diesel-oil railroading in the magazine, the more I like it." ●

Shirley Barnhouse

"MY interest in railroading is due to the fact that there are four B&O trackmen in my family," writes Miss Shirley Barnhouse, Lucketta, Va. "For 37 years my father, Marshall C. Barnhouse, has been helping to keep the line safe for the passenger and freight trains that roll over it. My brother, Austin, has been on the job for ten years, and two uncles, Raymond and William Barnhouse, have been with the B&O for longer periods." ●

DESPITE his on-time record with *The American*—the PRR blue-ribbon train between New York and St. Louis—Engineman Clarence E. Baughman of the Cincinnati Division deliberately put his "string of varnish" five minutes behind schedule one day recently. Passengers learning the cause of delay commended him.

The story begins with the hogger wheeling the varnish eastward near Xenia, O., and spying a reddish hound with a hind leg caught in a fence. He was then running too fast to stop without considerable loss of time, but he called the Xenia telegraph office on his train-phone and asked that the local sheriff be notified.

Later, at home, he told his wife about it. The Baughmans love dogs. They used to have one, which somebody poisoned, and they still miss him. So they did not sleep very well that night, wondering whether or not the trapped hound had been freed by anyone.

Next day, before taking his train westward, Baughman said to his conductor, Harold Sevart: "If that dog is still hung up, I want to stop and get him off."

Sevart agreed. And that is why the normally fast *American* lost five minutes. Baughman halted his train near Xenia while the skipper and Brakeman Bill Hale ran over to the fence and released the animal. A grateful tail-wagging was their only reward. According to *Pennsy* magazine, the Baughmans have slept well ever since. ●

CLINCHFIELD is now only a freight line, we learn from Stanley D. Crews, Box 63, Waynesboro, Tenn., having recently discontinued its every-other-day passenger run between Elkhorn City, Ky., and Spartanburg, S.C., because of the automobile. Very few roads are in the happy position of the Canadian National's Hudson Bay line, which does not suffer from highway competition. ●

HUDSON BAY. "After reading with great interest Thomas Taber's article in your June issue," writes Mrs. V. H. Taggart, Box 1993, Denver, Colo., "I thought you might like to hear from a woman who covered that whole area and much more, 25 years ago, as a *Toronto Star* correspondent, with her husband.

"In those days, when northbound trains from Winnipeg were bi-weekly, a departure for The Pas was quite an event. We reached Winnipeg in the closed season and had to wait until the first wild geese flew overhead, northward, before we could go. While waiting, I played golf with Captain Mundy of the Canadian Mounties, who had just brought back a murderer after a 1000-mile Arctic chase.

"I was with Captain Penze when he rationed and put aboard the season's first work train with 500 men for doc construction at Fort Churchill. For 15 months I traveled by rail, plane, dog-sled and canoe, being the first white woman, I believe, to journey as far as Chesterfield Inlet, about 500 miles north of Churchill." ●

FOREIGN FANS. E. Gipps, 37 Cromwell St., Caulfield, Victoria, Australia: "Although I am mainly a juice fan, I enjoy just about every type of railroad story and article. White's *Plywood Empire Route* each month adds the sauce to a juicy steak."

Josef Nietlespach, Erlenweg 771, Zuchwil, Solothurn, Switzerland: "Being a fan, I'm interested in any part of railroading. I collect photos and descriptions of locomotives and trains for model-building and historical purposes. Would like to hear from other readers, anywhere. In my country, Swiss Federal Railways recently placed in service two new 6000 hp. electric locomotives,

each rated to haul 12-to-16-car passenger trains at a sustained speed of 75 km. per hour over 2.7 percent grades on the Gotthard line, eliminating the costly helper service.

"The last of our steam-powered railways are rapidly being electrified. One is the *Chemin de fer du Jura*, which I believe was Europe's only narrow-gage line using Mallet locomotives. Another is the unique 30-inch-gage *Waldenburgerli*, which suffered recently from floods, washouts and earth slides. Our narrow-gage Rhaetian Railways have just ordered six additional electric locomotives."

Laurence F. Stuntz, Paseo de la Reforma 18-309, Apartado 1181, Mexico 1, D.F.: "Congratulations on *Railroad's* improvement! Your historical articles are excellent. I would like to see them continued, but with more maps. Also the fiction, true tales, and fact articles that deal with technical problems and their solution. For example, Peter Josserand's articles. One of your best articles in years dealt with the rise and fall of Midwestern interurbans; it had a lot of meat. Locomotive rosters are becoming less important as diesels take over." ●

NARROW-GAGE passenger service on the Denver & Rio Grande Western is operated only in summer and on a tri-weekly basis over the Durango-Silverton line, all other Rio Grande narrow-gage passenger service having been abandoned last January 1, reports F. W. Clark, Jr., 1815 Sharon Place, San Marino 9, Calif. He adds:

"The only D&RGW narrow-gage lines now operating are Durango-Alamosa, 199.8 miles; Durango-Silverton, 45.2 miles, and Durango-Farmington, 50.4 miles.

"These lines were abandoned last January 1: Salida-Gunnison-Sapinero, 98.9 miles; Gunnison-Crested Butte, 27.7 miles, and Gunnison-Castleton (Baldwin), 15.4 miles. ●

CHALLENGING a recent statement in this department, Elliott W. Steward, Norway, Me., writes: "It is not true that the Central Vermont 600-class 4-8-2 engines were never used by the parent Canadian National anywhere except on the CV's lines and on through trains into Montreal. I happen to know that the CV's No. 601 worked a passenger run between Montreal and Portland, Me., for an entire summer in about 1944. Engineers Bonneau and Leigh, now retired, ran her.

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13 Pc. HIGH SPEED DRILL SET
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Made of finest tool steel specially tempered and hardened to give years of quick, clean, easy drilling. Shanks will fit all electric drills. Packed in sturdy, heat-treated, compartmented plastic tool roll. Sizes: ⅜", ½", ⅝", ¾", ⅞", and 1".
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3 Pc. PLIER SET $2.98 postpaid
Finest drop forged imported steel. Ground and polished heads, polished finish, and knurled handles for easier grip. Individually pocketed in heat sealed plastic kit.
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ACF Industries, Inc.

TOMORROW'S TRAIN. High-speed, low-slung, lightweight type streamliner, the Talgo train, built by ACF Industries, Inc., was inaugurated in Spain about four years ago as a tourist attraction (shown near Madrid) and is now running in Germany also. On a New Haven-Boston test run last June it attained a speed of 102 mph. The Rock Island and the New Haven have ordered Talgo trains for delivery late in 1955. Talgos have guided axles — that is, the axles and wheels are steered through curves rather than made to fight the rails around curves — an important speed and safety factor.

"When I first heard her airhorn I thought diesels had taken over this steam line. Luckily, they hadn't. We now have on passenger the 5200-5300 Pacifics and 600-class 4-8-2s, and on freight the 3400 and 4700 class Mikes, plus a few 2-8-2s of the 2500-2600 classes and besides these two 2-6-0s of the 700 class."

NARROW-GAGE roads have captured the imagination of Frank A. Lyon, Seaside, Ore., ever since his boyhood. "I read many stories about them," he writes, "and the glorious part they played in opening the West, and how, one after another, they were abandoned or merged with big systems.

"When I was a kid of 11, my highest ambition was to become a fireman on the narrow-gage Sumpter Valley, which ran between Baker City and Prairie City, Ore. I pictured myself dressed in blue bib overalls and a faded shirt settin' up there in an engine cab, with a pipe in my mouth, watchin' the hills as we climbed up around the curves—that is, when I wasn't heavin' wood into the firebox. Boy, oh, boy! And watchin' the smoke curl back.

"Well, I never did work for the Sumpter Valley, but in 1917, four years later, I got a job firing in the Union Pacific yards at Evanston, Wyo. The job didn't last long. As for the SV, you may have read in *Railroad* that its rails were torn up five years ago, and even the scar it left on the countryside is fast fading."

NIGHT RUN

THE red glare of an open firebox
Against a dead black sky;
The starry wonders of God's universe,
As the stilly miles slip by.

The long lonely shrill of the whistle,
The hiss of escaping steam;
The endless cadence of wheels on rails,
The crack of straining beam.

The drowsy song the night folk sing
Along the shadowy right-of-way,
The tender warmth of the 'wakening sun
Caressing a new-born day.

These are the night run's lures,
These are the graveyarders' pay;
So give me a call for midnight,
For dreamers can't work by day.

—Douglas Ward

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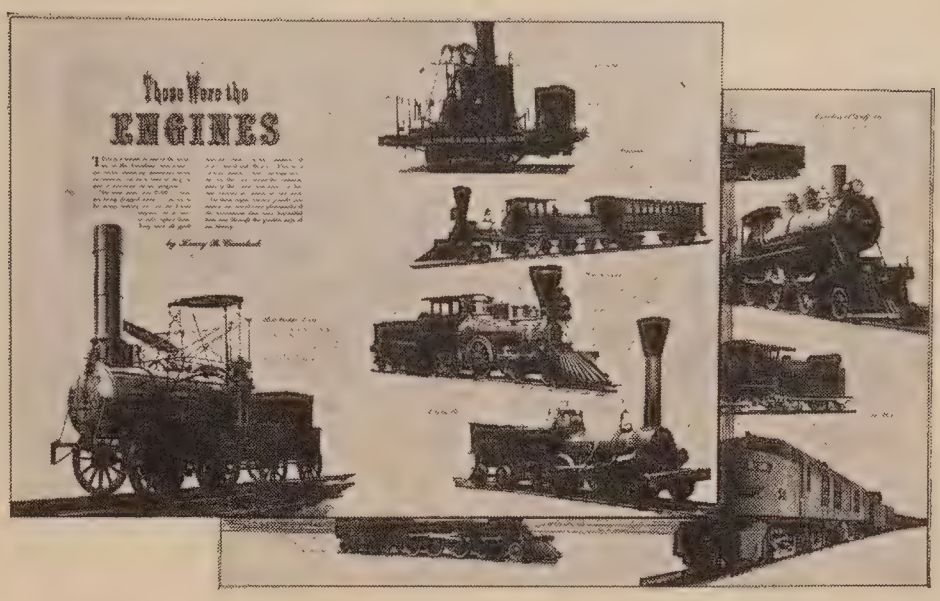

TRULY A COLLECTOR'S ITEM

Whether railroading is your occupation or your hobby you'll want a copy of this colorful collection of motive power. Among the eleven engines featured are the *Stourbridge Lion*, the *DeWitt Clinton*, the *Atlantic*, the *Lafayette*, the *Wm. Crooks*, and the *Thatcher Perkins*.

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10/54

PEANUT BUTCHER

(Continued from page 19)

of the trunk and arranged attractively so that passengers could see what we had in stock. The soda water, sarsaparilla, and ginger ale had to be covered with ice in the container, and the oranges, apples, and bananas arranged and displayed in their baskets.

Shortly after we left the station, I would go through the train with an armful of the morning papers, being careful not to get in the conductor's way as he collected tickets. Whenever we met, I had to step aside until the "Captain" had passed. With luck most of the papers would go. Some of the passengers who knew I was trying to get back to college helped by buying their papers after boarding the train.

After getting rid of the papers, I'd return to the smoker and go up and down the aisle with a basket of cigars, cigarettes, gum, and chewing tobacco. In no time at all the car would be filled with the smell of tobacco and the aromatic scent of peeled oranges rotting in the cuspidor, mixed with coal smoke from the engines. It wasn't an unpleasant odor.

Then I'd go back through the cars with a basket of fruit. I generally sold quite a lot, especially if there were some children aboard. The passengers had apparently eaten a hasty breakfast in order to catch the train, and an apple, a banana, or an orange was just enough to satisfy them until it was time for lunch.

Now, perhaps, as the morning wore on, someone would want something to read. I'd carry an armful of magazines through the train with the titles displayed clearly, calling out their names and stopping near anyone who looked as if he needed something to while away the time with, maybe leaving several magazines for inspection until I passed through again on my way back to the smoker.

By mid-morning, cracker-jack, peanuts, and popcorn began to sell well. It was getting on toward lunch and people were a little hungry. By noon, candy began to have a good sale. You had to use your own judgement about when to sell what, but you learned pretty quickly through trial and error.

By mid-afternoon, the train would get very noisy, dusty, and warm. When the passengers opened a window to let in a lot of hot breeze, they also let in clouds of dust and cinders. I'd carry a metal tray or basket of soda pop through the cars and the passengers would buy it eagerly, drinking from the bottle with wheat straws.

Some of the all-day travelers might come to the smoker to see what books were for sale, and occasionally I'd go through the cars to show what we had. *A Slow Train Through Arkansaw* was popular, but ordinarily books didn't have much of a sale.

Passengers also frequently asked about good hotels, and it was difficult not to mention the one that would put us up for the night free. Restaurants along the line also gave us free meals for directing passengers their way.

Just before the end of the trip, I usually went through the train and, with the owners' permission, picked up any magazines or newspapers which had been discarded. I got so I could fold a used newspaper so it looked as if it had come right off the press. The papers and magazines, if they had the News Company's stamp on them, could be turned in for credit. Usually people didn't resent our picking up these articles, for it helped keep the cars clean.

After the magazines had been collected, I had to make an inventory of the stock and check it off. Woe betide the unlucky peanut butcher who accidently turned in any papers or magazines which did not have the company's stamp on them! Mr. Burnham would throw them out and ask the lad, who could have sold the unmarked magazines to his own profit, whether he expected to go into business for himself.

The newsboy had to provide himself with a neat blue uniform with a stand-up collar and brass buttons, and, wearing this, a good-looking newsboy had the opportunity to make feminine conquests all along the line. I had a long nose and was rather skinny, and I couldn't see that any young lady would be much interested in me. But occasionally there was a fleeting romance.

One day when a group of convent girls in charge of a sister rode the train, a pretty vivacious damsel with a twinkle in her eye followed me to the back platform away from the watchful eye of the nun. There was a little "sparking," and I got her name and address before the nun called her back inside. My subsequent letters to her at the convent were unanswered. I suspect they were censored and disposed of tactfully by the good Mother Superior.

Two of the best newsboys in the service were, so to speak, my competitors on the Local. They had been on the train many years, knew the traveling public, and had all the tricks. I was only eighteen years old, but in spite of my inexperience I kept well up with them in my sales. Their names were Ben Hurd and Louis Kohn.

Louis was the better salesman of the two. A ventriloquist and sleight-of-hand performer, he would keep the smoking car in an uproar with his antics, picking coins out of the queues of traveling Chinese and telling ribald stories to the drummers, who repeated them to their customers in the valley towns. Louis enjoyed embarrassing the country youths with his ventriloquism. Then he would regain their favor by selling them some book with a salacious title. The book itself might be harmless enough but Louis' warning to the customer not to read it where anyone could see him usually clinched the sale.

Hurd was also something of a trickster. It was he who taught me the short-change trick. When making change, you count the dimes and nickels into the palm of the left hand, leaving the half-dollars on top, so that the customer can see the amount is correct. Then you

shift the money to your right hand before dropping the coins into the customer's outstretched hand, secretly palming a couple of halves. Usually the customer slips the change into his pocket without recounting it. But if he protests, you get the money back in your right hand and this time release the correct change. I tried this several times with success. But my conscience bothered me, and I gave it up. This was not my way of making money.

Mr. Burnham was always telling us all how much more cash other butchers turned in, but I did as well as any. Usually I was able to keep about a third of what I took in, although the allowed commission was only twenty percent. The rest came from tips, running errands, carrying packages, and delivering messages. All this was not strictly legitimate, but, in my opinion, there was no harm in buying something in the city and bringing it back to a friend along the route, though, of course, this took a little business away from the Wells-Fargo Express Company.

THERE were, in those days, certain rules which we had to adhere to. One was that the scene of railway wrecks was not to be pointed out to passengers. This, of course, was a wise ruling. In those days there were plenty of wrecks. The road was called in the advertisements, "The Road of a Thousand Wonders," but the public had begun to nickname it "The Road of a Thousand Blunders." Yet I never was involved in a train accident, though a couple of times I came pretty close.

Once, as a train was approaching a station where I was to pick up a bundle of papers, I waited on the lower step of the car to get off. Behind me was a well-dressed middle-aged woman. As the train began to slow down, I swung off to the ground, propelled along at a good run by the momentum of the train. The lady evidently thought the train had stopped and unconcernedly stepped off too. I saw her as she was thrown, and, turning quickly,

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MORE CLASSIFIED ON PAGE 69

tackled her, much as a football player might. We rolled over and over and finally came to a stop only a few short inches from the car wheels.

Being a peanut butcher sometimes took ingenuity too. During the winter of 1904, there was a derailment in the then sparsely settled San Fernando Valley. Our train had no diner, and we were stalled for hours out there in the middle of nowhere. The passengers were famished. I walked through the sand and sagebrush to a farm house about three miles away where the farmer's wife, a pleasant elderly woman, had just baked some delicious home-made bread. With some home-cured ham boiled the day before, she made up about three dozen first-class sandwiches and some hard boiled eggs. These I sold to the hungry passengers who clamored for more.

Then one night, Mr. Burnham told me he was putting me on Trains 21 and 22, a fast passenger run to Los Angeles. It was an advancement, and he figured I could make more money there.

Trains 21 and 22, the *Shore Line Express,* made a trip from San Francisco to Los Angeles one day and came back the next with a layover on the third day. A lot of fine people traveled on it, among them Joaquin Miller, Jack London, and Jim Jeffries.

One morning, H. Rider Haggard, author of *King Solomon's Mines* and other popular novels of the day, got on my train with his secretary. As they rode along, he dictated part of his latest book. He wasn't particularly pleased when I tried to sell him one of his own books, but that was nothing to what he was when I tipped off a fair young thing that the great author was on our train and she refused to leave him alone until she had questioned him for five or six minutes.

The night runs from San Francisco to Los Angeles were not so profitable as the day runs. Business usually stopped around eleven o'clock when the brakie began turning down the pinch gas lights and darkening the cars. Some people wanted to sleep. Unless there was a card game going on in the smoker, I usually went back to the Pullmans. Ordinarily I could give the porter a cigar, an apple, or some other little gratuity, and he would let me slip into an upper.

One morning I overslept and got to the depot ten minutes before train time. Ordinarily, when one of the boys committed such a misdemeanor, Mr. Burnham fined him a few dollars, but, because he knew I needed every cent I could get, he pulled me off 21 and 22 and sent me on a slow train to Ogden, Utah. This was a hard four-day run, and there wasn't much money in it. I'd have preferred the fine. But I did get to see a lot of the United States that way.

On that Ogden run I wasn't able to change my clothes for four or five days. During the day there was the heat of the Nevada desert and at night the cold. I slept curled up on a seat in the smoker with my shoes off and my feet thrust into the sleeves of my overcoat and the tail pulled up over me like a blanket. But I was always being awakened by someone wanting a paper, a cigar, or some fruit. I was glad to get back again to the *Shore Line Limited.*

BEFORE the opening of the Bay Shore cut-off in 1907, the *Sunset Limited* climbed out of San Francisco 296 feet to Ocean View before descending again to sea level on its way south. The grade was very steep, and two or three engines were required to pull the train.

The *Sunset Limited* usually left in two sections, the first consisting of a baggage car and Pullmans, and the second of mail, express and day passenger coaches. I used to sell newspapers on the first section until the train reached Ocean View and dropped its helper. At Ocean View I'd pick up the second section when it stopped to uncouple its extra engine and ride it the rest of the way into Los Angeles.

But one time the second section climbed the grade into Ocean View with only one engine. I knew there'd be no reason for it to stop so I could hop aboard. I was in a real fix.

I thought of my open stock in the second section's smoker and what Mr. Burnham would say if I missed that train. Even worse, I was responsible for the stock and would have to pay for whatever was lost or stolen.

I crossed to the right side of the track where the engineer would see me, and, as the train sped by, I waved to him to stop. Then I heard two short blasts of the whistle and saw the rear-end brakeman waving as the heavy train came to a sudden stop. I ran as fast as I could and leaped aboard. The brakie who had pulled the train down gave me the cussing of my life, but I was forever grateful for what he had done. Ever afterward, when I sold papers on the first section I took good note that there were at least two engines on the second section. At least I never made that mistake again.

By the time the fall term at Stanford began, I had saved up enough money to go back again. But I still rode the trains. Mr. Burnham let me have the Sunday excursion trains and any special excursions that fell during the holidays. Thus, during the following years at Stanford and at medical school, I worked the whole time as extra for the news company.

Most of the time I rode the *Del Monte Express,* a first-class train running between San Francisco and Monterey Bay points. It was hard work, but it kept the wolf from the door. I made some good friends on the *Del Monte.* A group of sportsmen, many of them doctors who regularly took the train to Elk Horn, a large duck preserve four hours from the city, played cards most of the way, and the butcher got a dollar or two for the use of the cards and board. I can still see the expression on some of their faces when they found me, a mere newsboy, seated for a few moment's rest, diligently studying a copy of *Gray's Anatomy.*

A few years later I was a doctor myself. In 1913 I became Assistant Resident Physician at San Quentin Prison, and my days as a peanut butcher were over. ●

HORSECARS TO BIRNEYS

(Continued from page 47)

came from the Bakersfield and Kern Electric Railway, in far away California. Halifax then had eighty-two Birneys in service, making it one of the biggest all-Birney transit systems in the world.

One of the funniest sights during the otherwise grim war years was Halifax' fortified car barn. Halifax was practically in the front line, and security and blackout regulations were strictly enforced. An important base of operations for the navy, army and air force, it also was the rendezvous for the trans-Atlantic convoys. Everyone feared the Germans might come ashore in force some dark night, capture the street cars, and use them to spread out through the city and seize key defense points. So the power house and car barn near the waterfront took on the appearance of an armed camp, surrounded by barbed wire entanglements and sand-bag dug-outs. Heavily armed guards were on duty at all times. Fortunately this was one of the many bets the Germans overlooked. Nothing at all ever happened, although it was reliably reported on several occasions that captured U-boat crewmen were found to have Halifax street car and theater tickets hidden in their pockets.

Although the Birneys got fresh coats of their bright yellow paint at frequent intervals, the damp Halifax climate was very hard on the steel of the car bodies, and during the war they literally rusted away. When the war ended, the system's physical equipment was in bad shape. Much of the trackage would have to be rebuilt immediately, and most of the Birneys had deteriorated so badly that further repairs were useless. New cars were not being made, and good used cars were no longer to be found anywhere. And so, after careful consideration, the company reluctantly decided to scrap the street railway and replace it with a modern trolley coach system.

Everyone was sorry to see the passing of the faithful little Birneys, but there was no alternative. The new trolley coaches were quiet, comfortable, fast, and efficient, and the city was more than adequately served by a skillfully planned network of routes. March 26, 1949, was the "day of sadness" when the Birneys ran for the last time through the famous city's congested downtown streets. During succeeding weeks, while the changeover was being made, Birneys still continued to operate on the edges of the city and at night were parked on the streets because they could no longer go down to the carbarn. Then, as the remaining stretches of line were abandoned, one by one the powerless Birneys were towed by trucks over the shining rails to the carbarn. Finally, on April 30, Number 156, the last bright canary yellow Birney still in regular service, came down from Richmond. An epoch in Halifax transportation history had come to an end. ●

TRANSIT TOPICS

GOOD NEWS for streetcar and interurban fans: Steve Maguire is coming back! A noted authority on electric lines, Steve launched this section for us in 1942 and carried it on successfully for years. He will again take the controls, effective next month.

Of course, we miss Ted Sanchagrin, who left us to go on the staff of an advertising trade journal. Ted's expert handling of *Carbarn Comment* in Steve's absence made many friends for *Railroad Magazine*. We wish him the best of luck in his new job.

Address all *Transit Topics* mail to Stephen D. Maguire, *Railroad Magazine*, 205 East 42nd Street, New York 17, N.Y.

"DO READERS send in the photos that are used in *Transit Topics?*" asks Richard Nolan, Box 331, New Hope, Pa.; and this kind offer comes from George K. Bradley, 1505 Michigan Ave., La Porte, Ind.: "If you are hard up for electric line photos, I can supply plenty and will do it gladly." Thanks, George.

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INVENTORS WRITE Patrick D. Beavers, Registered Patent Attorney, 1092 Columbian Bldg., Washington 1, D.C.

MORE CLASSIFIED ON PAGE 67

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The answer is that most of the photos used in this section ever since it started have come from readers. We welcome shots that are unusual and distinctive. Our files are overloaded with *ordinary* trolleycar prints. We need story-telling pictures—pictures that equal the quality of those you see in *Photos of the Month*.

They should have electric-line appeal *plus*. Something different. Maybe rich in human interest, such as a crew man doing a job. Maybe an odd angle shot or an artistic silhouette. Maybe a car with a background so striking that it "makes" the scene. Maybe a news-value shot. But only North American subjects, please!

The prints may be old or very recent, but they must be bold enough to show details clearly—not out of focus, not a dull gray, not excessively dark. We aim to make *Transit Topics* so attractive that even non-juicefans will want to read it.

"BECAUSE street railways are 'bussing' their last lines and tearing down wires and poles, more and more of your readers are becoming interested in trolleys," writes Henry Thayer, 153 Ridgeway Rd., Weston 93, Mass. "Some of my enthusiastic friends think nothing of going all the way to Allentown, Scranton, the Twin Cities or even Dallas in order to ride a trolley line that is about to be abandoned or converted to busses. Isn't it time you published an up-to-date listing of all existing electric lines?"

TIDINGS on the Fort Dodge, Des Moines & Southern come from Edward H. Meyers, 1521 Carroll St., Boone, Iowa, as follows:

"Trolley wire has been removed from the Rockwell City line, the Lehigh & Webster line, taking about 50 miles from the road's electrified portion. Ames branch was slated to lose its trolley wire, but I understand that the order for a third diesel has been cancelled, which would save the Ames line's trolley wire. A diesel is now handling this line.

"Retired from service: three electric engines: Nos. 105 and 107, built by Baldwin in 1908, and No. 201, GE, 1914. The line's president, A. F. Wheelock, has just bought and remodeled for his own use a Pullman with the outmoded observation platform. It supersedes his older business car, a former Wichita Falls & Southern coach dating back almost to the turn of the century, which he is trying to sell for use as a vacation cabin or roadside diner.

"Passenger cars are still running on the Fort Dodge line but with a reputed monthly loss of about $1000. The excursion business this past summer included several fantrips."

"RECENT issues of *Railroad* have been great," enthuses George Bradley. "The good old flavor of smoke and cinders coupled with the pleasant sing of trolley wires fairly crawled out from under the covers. The Saltair Line, pictured in your July issue, has been off the electric list for at least two years. Last time I saw No. 500 (June '52) she was gathering moss on a weed-grown spur. Also in July issue: the former West Penn No. 832 was built by Cincinnati Car Co., *not* Standard Steel."

"RECOLLECTIONS of former motormen published from time to time recall a story of Niagara Falls Street Railway that my grandfather told me," writes Richard Nolan. "A car line ran along the river bank, at one point under a large, wooden, garbage chute, down which refuse was dumped into the river. On a mild Sunday evening, when passengers were enjoying an excursion on an open-bench car, with fellows and girls holding hands and gazing at the moon, the garbage chute suddenly burst from pressure caused by backed-up slop. Well, you can just imagine the girls' wide-brimmed picture hats being pelted with rotten tomatoes and cornhusks and other debris! The feminine remarks my grandfather heard on that unhappy occasion were far from ladylike."

"CHICAGO'S old red streetcars have finally gone out of service," laments Rodger Darling, 1902 S. 17th Ave., Maywood, Ill., "the last 185 of them being replaced by 235 buses on Halsted Street, Kedzie Avenue, Cermak Road, and Lake Street. Fifteen other ancient cars are being kept for emergency use.

"The Windy City has only four car lines left, on Western Avenue, Clark-Wentworth, Broadway State, and Cottage Grove Avenue, all four using the new type Green Hornet cars.

"Back in 1947 when Chicago Transit Authority began operating the city's surface and elevated lines, it ran about 3200 cars, mostly oldtimers. In seven years the CTA has gradually changed over to Green Hornets—and buses! Shortly before the old red cars were

pulled off, the Central Electric Railfans Association chartered one of them for a farewell all-day trip around the city streets."

ERIE, PA., had plenty of activity on its radiating juice lines some 40 years ago, according to W. L. Schiewe, 304 Rich St., Iona, Mich. "The city lines there had one safety device that may have been unique," he writes. "They had derails, spring-loaded, that had to be thrown and held to get a trolley car across a steam railroad. The fact that the lever projected between the rails forced the trolley conductor to present his posterior, fat or otherwise, to an approaching locomotive, if any. You can bet he made sure no train was coming before he planted himself at the derail."

"BROOKLYN, N.Y., boasts a street which has supported an electric railway for about 65 years," comments Edward B. Watson, 934 Albemarle Ave., Brooklyn, after reading Donald Shaw's letter in a recent issue about similar service on Ocean Avenue in Revere Beach, Mass., that lasted over a span of 64 years.

HAROLD YOUNG, 10 Northway, Bronxville, N.Y., has written an interesting, illustrated, 30-page booklet on the Latonia Street Railway, on which streetcars ran between 1900 and 1925, reports R. Lee Parent.

PACIFIC ELECTRIC feature in our August issue prompted these remarks from Jacob W. Cheney, 191 Hartford Rd., Manchester, Conn.:

"If rail transportation service is to be maintained it must be patronized. The same applies even to some bus lines in my part of the country that are petitioning to give up or reduce their service. Occasional patronage is not enough. Too often good rail service has been taken for granted and the public seems to be surprised when a railroad or a streetcar line is abandoned or given over to the vultures—pardon me, I mean the buses."

JOHN H. LINDALL of the Boston Elevated Railway was promoted to shop superintendent in 1905, many years before the development of articulated cars of the company's surface lines, states Edward E. Wood, Jr., 68 Needham St., Dedham, Massachusetts, correcting a letter he wrote to us some time ago.

"How many stories do you know of electric cars running away under their own power with nobody at the controls?" he goes on. "We had an interesting case in the World War II period on the Boston El's surface lines (now operated by the Metropolitan Transit Authority). An old single-truck boxcar was stored in Lotus Place carhouse. In its palmy days it had been a for-hire parlor car but later was reduced to the drudgery of rail-grinding, which the boys call 'gold-plating.' The term stems from the shiny smoothness of the rails being ground and to the ease of the job, not bothered by schedules or passengers.

"This car, No. 942, was stored unattended at the head of a long string of rolling stock. Apparently some teenagers playing in the car yard became interested in the oldtimer, put her trolley on the wire, and opened the ancient controller, setting the car in motion, and then jumped off to watch the fun from a safe distance.

"Well, this must have been what the once-glittering parlor car was waiting for. With a joyous squeal of the wheels she rolled out of the drab-looking yard and onto the southbound rails of Washington Street. Free at last! Kicking up her heels, No. 942 danced along the shining steel in his abandon for about a quarter-mile."

Our correspondent was on duty in Arborway carhouse yard at the time. He saw the runaway prancing along merrily at moderate speed. She failed to throw the electric track switch at the yard entrance, and, veering left against rush-hour traffic, she galloped into the Arborway.

"A big, pompous semi-convertible had just pulled into the yard from the same line after discharging a load of passengers," Mr. Wood recalls. "The operator was copying his register readings when the gay little grinder rounded the curve with wheels screaming and entered the yard, still in a frolicsome mood.

"Not slowing down, of course, she crashed into the rear of the dignified semi-convertible. That ended the picnic. But at least, old No. 942 reflected, she'd had a last glorious fling—something to mull over with pride in her gray declining years. Nobody could say she had lost that spark of independence which is the birthright of all good parlor cars.

"Operator Howard respected her feelings. His car, the big semi-convertible, had been involved in a collision

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which presumably he thought had been caused by a fellow operator's mistake. Mr. Howard was no squealer. He had no desire to be a witness to what had happened. So he deliberately turnd his broad back and strode rapidly away from the scene.

"Someone shouted: 'Hold it a minute, Jake!'

"It was Si Hadley, the Arborway platform starter, who was running across the yard toward the grinder car. Too late, of course! The impact had already reduced the front platform to rubbish filled with bits of broken glass that sparkled in the bright Boston sunshine.

"They say it was miraculous that the consequences were not more serious. The daring little runaway had operated herself safely through the heavy traffic during the early part of the day rush hour!"

Mr. Wood asks, "Would you like more true stories of this sort?"

"WHO can supply details on the trolley line that used to run between Pelham Bay to City Island, New York City?" asks George W. Kingston, 4314 Byron Ave., Bronx, N.Y.

FOUR-WHEELED, OPEN, ELECTRIC trolley car, pictured in July issue as being on display at Knott's Berry Farm, Nuena Park, Calif., spent her last years of operation as No. 9320 on old Los Angeles Railways (now L.A. Transit Lines) before being sold to some private party in 1941, reports J. C. Burchard, Box 437, Short Beach, Conn.

BULLETINS 1 to 10 inclusive of the Electric Railway Historical Society, 7625 Gregory St., Chicago 31, Ill., are still available at prices ranging from $1 to $2.50, depending upon the number of pages. These booklets are well illustrated and cover the histories of various trolley lines, car diagrams, etc. For a free illustrated leaflet describing them all, send stamped envelope to the Society.

REVELATION. There are some subway cars in a certain city which still have kerosene lamps, you know. We didn't, until the *New York Times* came out recently with a three-paragraph boxed item saying they're on their way out.

This vestige of the past was doomed when the New York City Transit Authority ruled that such lamps on some of its transit-line trains must be replaced with electric lights.

The Authority is spending $559,000 to install steady electric beams in place of the flickering oil flames on the rear of 1,378 IRT subway cars. This will result in an estimated $89,573 annual savings in operating costs.

The Authority said, "These new red tail lights will be as safe and dependable as those on the newer BMT and IND cars." Meaning, of course, that kerosene is more dangerous than electricity in this particular case.

It means also the eventual elimination of a special group of 17 workers known as wick-trimmers. That profession itself could be the germ of a future article here. Perhaps some *Transit Topics* readers know of other city subway systems with wick-trimmers.

TRAM PROFIT. In Douglas, Isle of Man, horse trams outdid buses in most figures during the 1952-53 year. The famous horse trams, last in Great Britain, had only 1,602,077 passengers, while the buses carried 8,353,198 riders, but there the advantage ended. The trams had a surplus of $15,271. This helped to provide a transport balance of $1,778, since there was a deficiency on bus operation of $3,192 after meeting loan charges of $13,961.

NO CAN DO. Most suggestions from readers are well taken, and receive consideration. One from a new subscriber in Los Angeles several months ago started out with, "This section has lots of interest and information for me and others interested in trolleys and interurbans." But the crusher was this: "Why not cut out all advertising from your magazine so as to allow more space for editorial material?" The answer is: No freight, no railroad. No advertising, no *Railroad.*

LONGEST RUN. New Orleans holds two claims for longest service in street railway operation in any city anywhere. The St. Charles Avenue line, still operating, has been running continuously ever since 1835—a total of 119 years. The 93-year-old Canal car barns, still housing and servicing the Canal-Cemeteries line, got going around 1861.

Readers can catch up on street railway doings in New Orleans for themselves. E. Harper Charlton, 746 South Lake St., Los Angeles 57, Calif., has just completed a history of all New Orleans rail lines from 1831 to 1954, to be published this fall.

MAKE WAY

(Continued from page 22)

headed for the crew dispatcher's office. When a fireman got turned in, it was generally for incompetence, and they socked plenty of brownies onto your record, or maybe worse.

Of course, Pete reasoned, he'd fire the *Prairie Belle* only until a regular fireman could be assigned. The job was up for bids right now and would go to a man with a lot more seniority than he himself had. But if he made good, in spite of Mr. Cass, he'd probably be called for passenger work again and that was what Pete wanted most—riding the cab of the varnish!

Pete liked fast runs, and he knew that on some of the desert stretches the speed queens were allowed to make ninety miles an hour, with a ten-percent tolerance.

Now, the 4-8-4's are a dual-purpose engine, built to haul either redball freight or heavy passenger trains. Pete had fired them on merchandise runs and did not figure on having any trouble. Still, he couldn't help pondering over the hostler's advice.

When the Shanty Town kid climbed up through the steel gangway, he found old Mr. Cass in the cab ahead of him. The hogger looked neat as a pin with his striped denim overalls, jumper, and peaked cap—a lean, grizzled figure, slightly stooped from the weight of years but keen-eyed and alert.

Dan sized up the fireman. What he saw was a short, bony-framed lad with broad features and large ears that seemed to have been tacked on as an afterthought. Pete Kovac did not inspire confidence in the mind of the aging engineer. Dan wondered how he would stand the gaff on a busy railroad.

There were times when train-order tissues kept piling up in the clip until they almost drove the engineer crazy trying to remember them all. In days gone by, Dan had been able to absorb the instructions at a glance and carry them in his head for the length of the division. Today he had to study them carefully and then kept referring back—just to be sure.

With Fred McNelly in the cab, Dan had not felt uneasy. Fred would always keep a check on things. That really helped, especially when the *Prairie Belle* was fighting the clock at eighty miles per hour. Dan loved the open road and hoped to stay on it until his days at the throttle were done.

When he finished appraising the new fireman, Dan's lips tightened, and his lids squeezed down under the bushy white brows. He did not address Pete directly but grumbled about young squirts being called to fire a fast train like the *Prairie Belle*.

Pete knew now what the hostler had meant about not letting the oldtimer get in his hair. Without intending to be impudent, he said finally: "Don't worry, Mr. Cass. I can handle my end of it."

Dan almost blew a gasket, but was secretly pleased at getting a rise out of the young fellow. He could start bearing down now.

"Wise guy, eh? Well, on this job you're good for just about one trip."

Pete flushed clear to the tips of his bat-wing ears, and he heard himself saying, "That's what *you* think." The words came out before he knew it.

When a fireman on the spare board catches a regular run, he owns it until he is bumped by "whiskers," meaning seniority, or until his hogger turns him in. *Doesn't look so good,* Pete told himself, *the way things are starting out.*

THE PADDLE of the dwarf signal beside the engine-house lead dropped, waving the 3285 out to tie onto the cars of Number 10, the eastbound *Prairie Belle.* Pete felt better when they began to move. It eased the tension of being alone in the huge cab with Engineer Cass. The clatter of eighty-inch drivers on the frogs and switches was sweet music, with the soft mutter of the exhaust—a prelude to the thundering orchestration of the main line.

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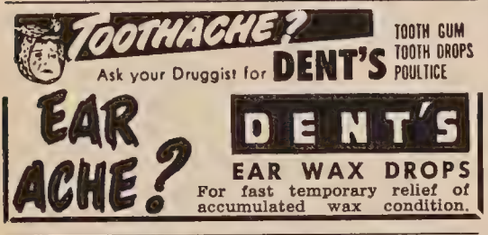

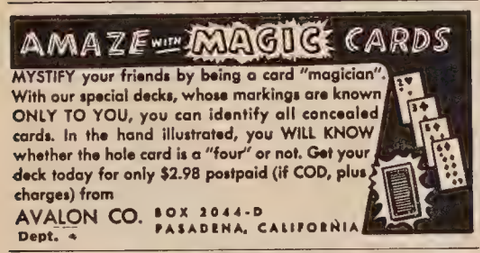
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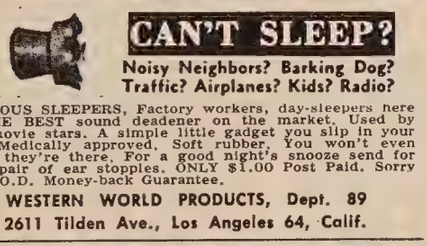
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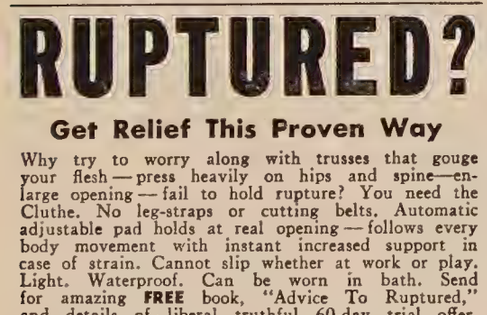
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down onto the long line of gleaming Pullmans. A Tuscan red sun dropped away into the low desert hills and the twilight ran its brief course. Up came the train conductor with a handful of orders. He greeted Cass with the easy familiarity of men who work together and squinted up through the gangway.

"Who's your new fireman, Dan?"

"Fireman? Humph!" The runner climbed stiffly down to look over the tissues.

"Guess you'll miss Fred," the skipper said.

"Yeah." Dan's voice betrayed weariness.

The *Prairie Belle* was to carry signals for a second section. Pete went out on the running board and put the number "1" in each of the illuminated number brackets high on the big boiler. Green lights winked out astride the smokebox. He heard the conductor say that the second section was a hotshot. As he hauled himself back into the cab, he saw Dan inserting the train orders in the clip on the back head, and he said, "I wanta see those flimsies, Mr. Cass."

The hogger glared at him, half a mind to ignore the boy. However, the Book of Rules on every road states clearly that enginemen must show train orders to their firemen and see that they are read and understood. Cass handed him the tissues. Pete studied them attentively and passed them back.

Dan grunted. That kid knew his stuff all right! Some distance behind them, alongside the burnished Pullmans, the bright spark of the conductor's electric lantern rose in a highball. It being on the fireman's side, Pete relayed the signal across the cab. "Let's go!"

But instead of taking his word for it, Dan crossed the cab and checked for himself, just to show the ashcat he didn't trust him. Pete's lips curved in a grin.

With the reverse lever down in the working corner, the old engineman began jockeying the stirrup throttle out and back. He felt for the first bite of the drivers as he watched the ground for forward movement.

Pete, on the left, immediately moved the lever of the firing valve to compensate for the rush of steam to the big cylinders. His every nerve was taut.

A throaty cough barked from the stack. Pete listened to the nervous banging of the bell, the blasting flare of burning fuel oil, and the roar of steam from the booster, as the heavy train began to move. Mail-storage cars, the working mail car, dormitory and lounge car, dining car, sleepers, and observation lounge car, gliding away from the bright station lights, with the red ember of the rear-end sign telling the world that this was the famous *Prairie Belle.*

An extra-fare train, eastbound Number 10 had rights over just about everything. Pete was in a buoyant mood. *Make way for the eastbound!* he told himself. *This is the life!*

The first slow labor of the exhaust quickened into a rapid staccato beat. The deep-toned whistle screamed mournfully for grade crossings. Soon the city lights were left far behind, with only an amber glow against the western sky.

Every moment of the run was a thrill to Pete. The boy divided his attention between the bright eyes of the block signals, rushing to meet them, and the shining dials on the back head. He watched the steam gage and the glass of the water column. This device regulates the firing valve to meet the varying demands of throttle and cutoff, feeding steam to cylinders and pistons.

At first, Dan sulkily refused to call the signal indications when they came whipping down on these stiff sentinels beside the track. After a time, however, his gruff voice boomed across the cab, "Clear on the signal!"

And Pete gleefully repeated his words, "Clear on the signal!"

FIRST NUMBER 10 roared through the night. Orange groves and vineyards. Small towns asparkle with light. Switch lamps glimmering. Wheels crashing over switch points. Pullmans cradling gently on their jostling trucks.

They climbed a grade. The exhaust settled to a hard, steady chant. Pete loved the sound of a locomotive working steam on a hill. He leaned from the cab window, feeling the cool, clean air on his cheeks.

The desert wind flowed in a strong tide. *Sand will be blowing over the hump,* Pete thought. Sand in the desert was a devil.

At Mesa station, the operator gave them a green board. Dan tugged at the peak of his cap, and shortened the cutoff. The silver beam of his headlight reached away down the glimmering bands of steel.

Their pace quickened until it seemed that the mighty 4-8-4 was close to quitting the rail and joining the stars. It was the big moment Pete Kovac had lived for—riding the cab of a high-liner! He glanced across at Dan. The engineer was hunched over the armrest, cool, competent, carrying on his shoulders a grave responsibility. *You've got to hand it to the old man,* Pete decided.

The wind grew in force, each gust more savage than the last. Dust was marching on the desert floor. Tumbleweeds fled along the track. The block signals were blurred.

As they approached Joshua depot, a pinpoint of red flung out its challenge. Dan whistled with vast impatience. The crimson eye winked twice, indicating that the *Prairie Belle* was to pick up orders on the fly. They call it "hooping em up."

Dan shut off and made a brake application, and his voice rumbled, "Get that hoop!" His tone reflected an unspoken, "God help you if you miss it!"

Fiendishly, the wind chose that moment to increase its fury. The fireman crossed the cab and got down on the ladder, tense, his heart slugging at his ribs. Firing freight drags, he'd caught train-order hoops plenty of times, but this was different. They were rushing toward Joshua like an iron thunderbolt.

Pete squinted for the dim shape of the operator, fighting the squall at the platform edge. It was almost impossible to see the upheld hoop. He stabbed at it desperately with his free hand—and missed!

"Damn fool!" Dan yelled, slapping the brake handle around. They had to back up for their orders, and with that second section riding their tail.

Pete guessed that Fred McNelly wouldn't have missed the hoop. Still, the hogger had been wheeling 'em too fast—much too fast, the way the dust was blowing. In silence he took Dan's bawling out. *This does it,* he thought bitterly. His blundering had set up the thing the grumpy old engineman had probably been waiting for, an excuse to turn him in.

The devil was loose on the vast sweep of desert. The devil and sand. Winds mauled the wasteland like an irate giant, snatching at everything that was loose and hurling it into the black maelstrom. There were bits of sage and greasewood from the high flats, brown dust from the dry lakes, stinging sand from the great yellow dunes. Loose gravel struck at the jacket of the 3285 like birdshot.

Dan was forced to shut the cab window against the violence, depending for vision on the smaller window set in the front of the cab. That, and the youthful, keener eyes of Pete Kovac.

THE FURY of the storm reached into the Midland dispatcher's office in the big city. A loud speaker at his elbow howled, wailed, and crackled. The voices of the operators along the line, OSing the battling trains, fought through, but often were vague and distorted. At times they faded out entirely.

The man at the train sheet hesitated to switch to the Morse circuit. Not all the ops were familiar with the code, and tonight he might need to get through to any of them. The orders he must put out would mean the difference between keeping the burden of traffic moving and a hopeless snarl.

However, his first worry was that some engine crew, struggling to make time, might miss a block signal in the seething fog of sand and crash into a rear-end. In particular, the dispatcher was concerned with the two sections of the *Prairie Belle.*

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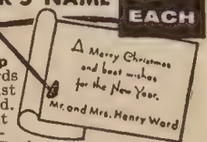

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Bold Roy Bradley, at the throttle of Second 10, was given to taking chances. If Dan got stopped on the main line and if the flagman, fighting wind and sand, didn't get back—well, a man could only pray that every railroader out there played it safe and did his job.

The dispatcher glanced at the clock. First 10 should have passed Palms by now, even with the time lost by backing up for their orders at Joshua. He punched at a selector button, ringing Palms.

A distorted voice from an operator screeched back at him. Some freight drag, heading into the siding, was having trouble. With that cross-wind, the hogger couldn't get sand under the drivers.

The dispatcher shook his head. A million packs of sand blowing around on the desert, and you couldn't make a miserly handful stay on the rail!

THE *PRAIRIE BELLE* was thirty minutes late when the powerful 4-8-4 went stamping past the telegraph office at Palms. Dan Cass was foaming. He gave the varnish a ride between Palms and Shoshone and made up four minutes.

At Shoshone, the *Fast Mail* was in the hole, and she hooted derisively at the *Prairie Belle*. Dan swore. He could almost hear Ed Kramer, at the throttle of the *Mail*, saying: "Where the hell have you been, you old buzzard?"

The dispatcher's brow furrowed. He was confronted now with the problem of what to do about Number 1, the *Moonbeam*, the westbound diesel-powered streamliner. The *Moonbeam* was superior to the *Prairie Belle* by direction and was due out of the Junction at 10:05. Dan would never make the Junction for her.

The dispatcher ran his eye down the train sheet. He'd taken care of that time freight, those green fruit jobs coming out of the ice dock at Valley, the two helper engines in the wye at Mesa, waiting to come down the hill, three freight drags and the *Fast Mail*. But right now the *Moonbeam* was the top problem. Sleek Number 1 was a lot of class, and he wanted to give her the road, but it would mean putting the *Prairie Belle* in at Sage, with a further loss of time.

Finally he decided to give away ten minutes on the *Moonbeam* in the hope that the *Prairie Belle* could make the Junction by 10:15. He called Devore and Desert Junction and put out an order, addressed to the two trains.

No. 1 wait at Desert Junction until 10:15 ten fifteen p.m. for First No. 10.

It was almost impossible for the dispatcher to get the order and the repeats through the din on the wire, but he did it, eventually.

The operator at Devore blinked his train-order signal, and the engine on the *Prairie Belle,* boring through the murk, answered with two curt blasts.

Pete Kovac picked up the hoop and read the order to Dan. The engineer glanced at his watch as he jerked at the throttle. From here in it was going to be a battle—a battle against the clock, against a desert sandstorm. And always there was the chance some freight drag, struggling into a siding, might block them.

The lights had to be green. It was hell trying to catch those block signals as they rocketed through the waves of screaming dust. Old Dan wiped his goggles and thrust open the cab window. A wild gust almost took his breath away.

At Minden a section crew was clearing sand from the switch points. Sand packed worse than snow. Other gangs were out along the line.

Dan thought he had never felt his age as he did tonight. Se was tired, his nerves edgy. Back in the peace and quiet of the Pullmans, folks were turning in, giving no thought to the storm, perhaps only vaguely aware of it. And behind them—behind the red marker lights of the *Prairie Belle*—Engineer Bradley, brash, reckless at times, was driving Second Number 10 hard through the same storm.

Pete felt the mounting tenseness. Dan, the veteran, was giving the 3285 a beating; yet he handled the train with a growing caution, aware of the danger of missing one of

those dust-fogged block signals; aware, too, of the younger man at the throttle of the second section, yapping at his heels.

And now the sand was starting to drift, which presented a new threat! At Mesquite, the *Prairie Belle* was thirty minutes late, and losing time.

THE MAN at the train sheet in the big town was watching the clock. Desert Junction reported the *Moonbeam* arriving. The dispatcher made his decision then. He'd have to change the meet to Sage, though it meant stabbing the *Prairie Belle* and heading Second 10 in back at Devore.

First 10 got their tissues at McCarty's—one copy for the engine crew; one for the conductor. In the cab Pete snapped on the lights and read the order. They were to meet the *Moonbeam,* Number 1, at Sage instead of the Junction. He noticed then the grim lines around Dan's mouth. Fighting the storm was an ordeal for the old man.

Dan Cass seemed not to be listening when Pete read the order. He took the flimsy from the fireman, glanced at it briefly and stuck it in the clip on the back head.

Pete thought it would be easier the rest of the way in, but Dan still seemed to be at war with the clock. Time was his enemy, time and blowing sand. There is no dimension to a sandstorm at night. It is a bottomless pit, a prison with neither earth nor sky. It is a devil and a witch. It is a cloistered hell with no earthly landmark for guidance.

Back in the train, the conductor peered from a vestibule, trying to orient himself, but he saw only a tormented gulf of blackness. In a minute now he'd give the signal cord a pull, calling Dan's attention to that meet at Sage.

In a minute now . . .

MAKING Desert Junction for the meet with the *Moonbeam* was almost an obsession to Dan Cass. Again and again the hogger had wheeled his string of varnish in ahead of Number 1's leaving time. He resented the smooth streamliner and her diesel, which seemed always to be waiting to taunt him if he were late, this *Moonbeam* with her fancy pants. Dan hated diesels, "the damned growlers." He hated the thought of a dispatcher borrowing time from the *Moonbeam* on his account. The luxurious *Prairie Belle* would be right in there tonight if his no-good ashcat from Shanty Town hadn't muffed that hoop back at Joshua.

Sage was somewhere down ahead, a desert telegraph office and a little huddle of buildings under the cottonwoods. Sage and its bleary switch lamps. Sage, fogged in by the dust blowing off the dry lake.

Dan Cass was thinking in terms of minutes, of speed and of that smug, sneering diesel on Number 1 at the Junction. He visualized that long tangent, reaching straight as a rifle barrel between Sage and Desert Junction—no curves, no cuts to trap drifting sand, no sidings or stumbling freight drags. Clear iron all the way, once they'd raised a green board at Sage.

The headlight was but a white blur, boring fast into a solid wall of blackness and flying sand.

Pete Kovac's eyes strained for landmarks that might give him a bearing. They must be close to Sage by now. If they didn't slow down they'd race past the switch, away past. Old Dan must be crazy—or had he forgotten that order?

Pete thought of the *Moonbeam,* its diesels churning up energy for those traction motors, coming against them. Maybe those guys in the tight, cozy cab of the streamliner might miss the signal east of Sage.

They would be looking for Sage, sure, and the *Prairie Belle* in the clear, not out on the main line a mile past the switch. Oh, block signals were fine, but you could miss them when the sand blacked them out.

Pete had an awareness of trouble, and he shot a glance across at Dan, hunched there on the right. "You're good for just about one trip on this job." That was what the runner hurled at him back in the city.

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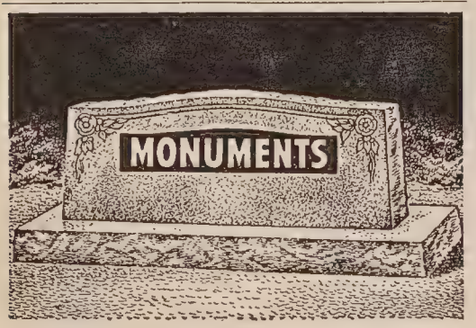

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Pete was expecting to hear the high call of the conductor's valve, but no signal came from the man in brass buttons. The fireman crossed the swaying cab and yelled at the engineer:

"Hey, don't forget we're goin' in the hole down here!"

Old Dan partly wrenched around, shouting angrily above the roar of the 3285: "Are you trying to tell me how to run this train?"

"No, sir. I'm just remindin' you about the meet with Number 1 at Sage."

"No damned young squirt has to remind me—" The hogger stopped, suddenly remembering that order they'd received at McCarty's. It hit him like a blow. "First No. 10 meet No. 1 at Sage . . ." Good God!

Engineer Cass slammed the throttle home, grabbed for the air. The brakes dynamited against the racing wheels. Dan fed her sand, but the wind blew it a mile. The wheels hissed, screamed and smoked as they fought the shining rail. Forces built up by better than five thousand charging horses resisted the hand that tried to stay them.

Dan slammed the window open and leaned far out, squinting for the tell-tale gleam of a headlight. If Number 1 was down there at Sage, they'd go into her.

A switch light winked blowzily at him through the smother. The dark shapes of station buildings slid past.

PETE GRABBED a fusee and a lantern and squirmed out onto the high running board. Mauled and buffeted by the wind, with sharp sand blinding him, the boy made his way along the great barrel of the Northern-type locomotive. Once, in his frantic haste, he lost his grip on the handrail and was close to going off and down.

The onrushing cars of the *Prairie Belle* crowded the 3285 from behind like brazen hoodlums, forcing her on against her will. A thousand feet beyond the switch, the big 4-8-4 was still moving ahead!

Pete stood on the last step of the pilot, the headlight a bright jewel above him. The wind eased, and against the breathless hush a fish-horn trumpeted off to the east.

Number 1 was coming down the iron! Pete uncapped the fusee and lighted it. Before the 3285 had surged to a stop, he flung himself to the track and started to run. The sand-filled wind roared down on him like a demon. He leaned against it, gasping and staggering, and contested every precious foot.

In the cab of the 3285, Dan pulled his Johnson bar. He cracked three quick blows from the whistle, saying they were backing up, and the great passenger hauler put her shoulder hard against the train while the exhaust blasted.

The headlight of Number 1 poked through the billowing dust, and her fish-horn hooted an acknowledgment of the misty splotch that was Pete's red fusee, swung frantically across the single-track main. The haughty streamliner, moving in under control, cut its throttle. There was no cornfield meet.

Back at the switch, the *Prairie Belle* edged into clear and rolled slowly on down through the passing track. A lantern waved a highball from a vestibule, telling Number 1 the road was hers. Dan whistled that they were carrying green for a second section, and the horn of the diesel blared twice.

The *Moonbeam*'s motors roared up, and she went waltzing past Sage station like a sheeted ghost.

Pete caught the grab-irons of the 3285 and climbed the ladder to the cab. Old Dan mopped his seamed face with a blue kerchief, the cab lights shining down on him. A great weight lifted from his stooped shoulders, and his steel-gray eyes twinkled at the fireman.

"Regular paint-scorcher, that meet!" he said, shaking his head. "We both muffed one tonight, Pete. Looks like we're even up."

Dan Cass stuck out his hand.

"If only you had the seniority, my boy, you could fire the varnish for me steady."

Pete grinned happily. "Gee!" He had been accepted into the exclusive ranks of the men of high iron. Pete Kovac, the Shanty Town kid. ●

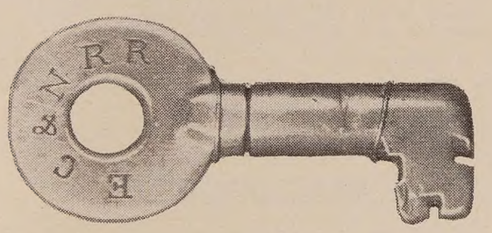
Railroad Hobby Club

R. F. Harding

"MY hobby is collecting switch keys," writes Robert F. Harding, 1st Lieut., U. S. Army Engineers, retired, 40 Beach St., Marblehead, Mass. "The collection started with keys from three old roads my father worked on as locomotive fireman and engineer, beginning in 1868 —the Rome, Watertown & Ogdensburg, the New York & Oswego Midland, and the New York, Ontario & Western.

"Next a retired Boston & Maine hogger gave me a B&M switch key he had been carrying for 44 years and a Rutland key he'd received when he qualified for running on that road with B&M trains. Then I found a West Shore key. Later, a retired conductor presented me with a Michigan Central key, vintage of 1890s.

"Thus my collection grew. It would take pages to tell the story behind each of my switch keys. I'll mention a few more. Gerald M. Best, the widely known railroad photographer, gave me an old Central Pacific key. A neighbor of mine supplied a key from the White Pass & Yukon. A World War I buddy donated keys from the Panama Railroad and the old Isthmian Canal Commission road. Two other keys came from the president of a big road out of Richmond, Va., because he happened to be a personal friend of two men who had served under me in the Air Service.



ONE of Mr. Harding's old switch keys came from the Elmira, Cortland & Northern (now Lehigh Valley).

"An insurance company official sent me three NYO&W switch keys. A now-retired New Haven engineer gave me two oldtimers—an Old Colony key that a father and son had carried for 60 years and a Norwich & Worcester specimen. A New Haven conductor donated an Old Colony & Newport key and a very old New Haven key. A retired B&M conductor gave me an Eastern Railroad (now B&M) key inherited from his grandfather, also a Lake Shore & Michigan Southern key.

"I expect to give this collection of about 270 switch keys to the Smithsonian Institution at Washington, D. C., for its railroad exhibit." ●

ITEMS sent to this department are printed free, in good faith, but without guarantee. Write plainly. No entry longer than 25 words will be accepted —except those dealing with back numbers of this magazine. Address *Railroad Magazine,* 205 E. 42nd Street, New York 17, N.Y.

Because of time needed to edit, print and distribute the magazine, all material should reach us nine weeks before publication date.

Use these abbreviations: *cond.*, condition; *ea.*, each; *elec.*, electric; *env.*, envelope; *eqmt.*, equipment; *esp.*, especially; *info.*, information; *n.g.*, narrow-gage; *negs.*, negatives; *p.c.*, postcard; *pref.*, preferably; *tr.*, train; *rr.*, railroad.

The term *tts.*, refers to public timetable, unless preceded by *emp.*, when it means employe's (operating) timetables.

(R) indicates desire to buy, swap or sell back issues of *Railroad Magazine.* (Specify condition of each copy.)

(*) indicates juicefan appeal.

SWITCH LIST

DON AUSTIN (*) High St., Troy, N. H., will sell 40 dif. United Traction Co. transfers, 1947, Troy and Albany, 25c; many other items for sale or trade.

(*) JIM BAKER, 9254 Airdrome St., Los Angeles 35, Calif., wants info. and pix on PE and SP, any size.

E. P. BAUMGARDNER, 26 West End Ave., Oneonta, N. Y., wants U&D and Delaware & Northern passes, tts., emp. tts. Will pay cash or swap public and emp. tts. Eastern roads incl. D&H and Rut.

HENRY BENDER, Jr., 151 Custer Ave., Evanston, Ill., will sell good negs., size 616, of steam locos.; mostly Midwest, IC, Milw., C&NW, some short lines and n.g.; will also trade negs. but only for top quality trades.

(*) RUSS BENNETT, 16 Morin St., Pittsfield, Mass., will buy photos, negs., or history of Berkshire St. Ry. or Pittsfield Elec. St. Rwy., or will swap photos; has 800 pix. Answers all mail.

W. L. BOGLE, 1944 Maple Ave., Yuma, Ariz., wants any size pix or negs. of EP&SW locos, also info. on SP wrecks.

(*) W. BROSCHART, 36 Maple St., Central Islip, N. Y., sells prints 8c ea. 2 for 15c of elec. RR, bus, trolley-coach, steamship, ferry, airplane; has 120,000 negs. Also trades prints, neg. color slides, etc. Wants pix, trolley, bus, boat, 1910-'40, any line, esp. those hard to get.

(*) JOHN BUFF, 3627 St. Rene St., New Orleans 20, La., will sell pix on many V.S. trolleys and interurbans; send 10c for list and sample photo.

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SEE PAGE 65

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NEW! Three telescopes in one. 3 different magnifications. 20 power for ultra-bright images with 40 and 60 power for extra long range. Guaranteed to bring distant objects, people, sports events, ships, moon, stars, etc. 60 times as close.

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79 Sudbury St., Dept. 28, Boston 14, Mass.

(*) GEO. CAPDEVIELLE, 2608 64th Ave., Oakland 5, Calif., sells pix elec., steam, some diesels, size 616; list, sample 10c; wants size 616 negs. on CSS&SB and Alaska RR.

DAN CROTTY, 1155 Shenandoah Rd., San Marino 8, Calif., will trade 35 mm. color slides SP Western Div. steam locos. and trs.; or buy 35 mm. color slides of D&RGW n.g. and std.-gage steam locos. and trs. Send stamped env. for list.

GORDON DAVIDSON, 648 E. North St., Eldon, Mo., will buy CRI&P pix, Mo.-Kan. Div. only. Send lists or prices.

(*) BOB DRENK, 6407 Ferguson Dr., Los Angeles 22, Calif., will sell or trade emp. tts., rulebooks, switch keys, hat badges; list for 3c stamp or send your list; wants PE pix.

(R) PHILLIP ELLIS, 3 Keiller St., Moorabbin, Victoria, Australia, will swap Australian RR. pix, incl. n.g., and stamps for *Railroad Magazine* and other RR. mags and books.

H. C. ELDRIDGE, 10 River La., Levittown, Pa., wants E. St. Louis & Carondoler Nos. 1 and 6; also St. LV. & Th 0-6-0's numbers 155 and 172 renumbered to Vandalia Line Nos. 205 and 206 all Vandalia Class Vbl. PRR B 21.

(R) BOB ESCHENBERG, Rt. 2, Box 308, Aurora, Ill., has *Automotive* mag. and manuals, radio books, radio parts, to swap for *Railroad Magazines* 1950 to '54; *Model Railroader*, bound vol., any year. Also wants pix or negs. GN steam.

D. F. FLEET, Jr., Tazewell, Va., wants *Trains Mag.* prior to 1947, perf. cond.; also tts. of N&W, CC&O, ACL, Sou., Interstate, Vgn., SAL, C&O, L&N, prior 1930.

JIM FRASER, White Sands Proving Ground, N. M., wants any *Off. Guide*, 1900-'10; will pay cash or swap from stamp collection.

CHAS. GARTIER, Rte. 3, Topeka, Kan., will buy up-to-date SP and CB&Q diesel rosters; write first.

C. C. GRAYSON, Box 1431, Longview, Tex., has size 116 and p.c. photos of B&O, C&NW, IC, MP, SP, Sou., others, incl. n.g., oldtimers and industrials. List and sample, 3c stamp.

(*) JOE GOULD, 72-22 Austin St., Forest Hills 75, N. Y., wants 8 mm. movie film, any elec. line, pref. NYC area; write first.

(*) J. C. HANBACH, Goodrich Rd., Clarence N. Y., wants current trfs. Cleveland, Coral Gables, Louisville, Toronto; will trade transit maps. No list. State wants.

E. S. HERA, 6008 Cresheim Rd., Philadelphia 19, Pa., wants 1925, '26, '32 PRR wall calendars, comp; has 1946, '47, '48, '49 and '50 to swap or sell.

C. G. HEFLIN, 3003 16th St., S., Arlington 4, Va., has many sou. photos, some old rare shots, few in color; also assorted RR pics; will sell in lot or singly. List, 3c stamp.

(R) ARNOLD JOSEPH, 2512 Tratman Ave., New York 61, N. Y., has large stock of *Railroad Magazines, Trains, Model Railroader* for sale, many years. List. 3c stamp.

BOB KRUGER, 264 E. 1st St., Fond du Lac, Wis., offers Sheffield velocipede and 1895 parts for $35, plus shipping charges.

HELEN J. KUENE, 16 Tallman Ave., Cranston 10, R. I., wants playing cards issued by all RRs., old or new.

R. E. LAWLER, 512 N. Weber, Colorado Springs, Colo., will buy or trade tr. ords.; has large selection; write for list.

BOB LE MASSENA, 2341 S. King St., Denver 19, Colo., wants address of Joe Stauber, who sent him kodachromes with no address.

ELVIN LIQUE, 917 N. 3rd Ave., Wausau, Wis., will buy 8 mm. color movies of NYC, Niagara, Hudson & Berkshire type steam locos, frt. or pass., action shots; also PRR 4-4-4-4 steamers and GG-1 elecs.; write first.

JOHN LOCKE, 428 Prospect Ave., Hackensack, N. J., wants p.c. size negs. of older types of Erie, CNJ, Rdg., NYS&W steam locos; also any Camelbacks. Will sell or trade excel, p.c. size pix of Erie, CNJ, Rdg., NYS&W and LV steam locos.

(*) BOB LOWEING, 6200 Glen Oaks, Los Angeles 28, Calif., will sell Sac. N. negs., size 116, send for list of eqmt. nos. and prices. Also has Seattle, Tacoma and Portland, Ore., trolley negs. to trade for negs. of same years, any int. Co.; Wants size 116 negs. or BCFR 1400-1401; also LCL and inter. eqmt.; will buy; write first.

S. A. MAHAN, 302 N. 6th St., Yakima, Wash., will sell tts. Erie 1885, Frisco 1886, GN 1911, Milw. 1911; U.P. and Santa Fe, ea. over 30 years old, good cond.; or trade for U. S. coins, transp. tokens, or first issues of mags.; answers all mail.

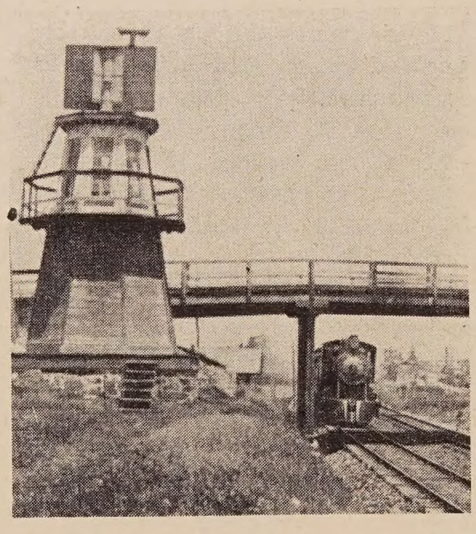
LARRY McDONALD, 28 W. 77th Ter., Kansas City 14, Mo., wants UP emp. tts, public tts., photos of all classes UP diesels, and info. on UP engines, trs., operations. Has emp. tts to trade or sell.

(R) BILL MILLER, 15219 Regina Av., Allen Park, Mich., will sell *Off. Guides*, Nov., Dec. '51; July, Apr., Dec. '52; May, Oct. '53, $2 ea. All 1943 *Railroad Magazines* exc. May; all '44, '45, '46, '47; all '48 exc. Apr. and Nov.; all '49 exc. Dec.; all '50 exc. Feb.; all '51; all '52 exc. Oct. and Dec.; all '53 exc. July, Aug., Oct., Dec. Lot for $18 postpaid.

GEO. MITKO, RD 2, Box 128, Burgettstown, Pa., wants material and pix of aband. Pa. short lines.

L. D. MOORE, Jr., 2102 Parker Av., Portsmouth, Va., will swap 1922 *Loco. Ency.*, good cond., for 1941 edition.

E. O. MULL, IC agt., Box 14, Herrin, Ill., will sell separately or whole his large collection of RR. and adv. pencils and eversharps.



Walter Taylor Frisbie

"LIGHTHOUSE." Octagon-shaped signal towers like this, manned by a single operator, once guarded curves on the Reading.

J. MURRAY, 33 Winthrop St., Rehoboth, Mass., will sell steam and gas driven amusement park size miniature trs.; photos, details $1.

L. W. NELSON, Croton Gardens, Albany Post Rd., Croton, N. Y., buys railroadiana, pix, drawings, old tts., emp tts., on BAR, MeC, other Maine roads, incl. defunct n.g.; state price.

(R) KEITH PRATT, Bloomfield Sta., P.E.I., Canada, wants copies of *Railroad Magazine* to complete his files; June, Dec. '43; Sept. '45; Nov. '46; Mar., Apr., May, Nov., Dec. '47; Feb. '49; Jan. '40; will trade *Railroad Magazine* Aug., Sept. '43; Apr., May '45; Mar., Apr., July, Aug. '46; Dec. '50; Oct., Feb., May '52; write first.

(*) M. E. RICH, Box 89, Sta., J, Toronto, Canada, offers set of 12 B&W pix Canada's first subway, size 116, for $2; kodachromes of subway, eqmt., stations, terminals, 50c ea. Wants to hear from st. ry. fans in far-away places.

BILL RYAN, Rt. 3, Box 3626, Edmonds, Wash., wants pix, plans, catalogs, prints, etc. also builders catalogs of Shay locos and n.g. locos.; will pay top prices for usuble material.

(R) VERNON SEAVER, 7742 Haskins Av., Chicago 26, Ill., will sell *Railroad Magazines*, Dec. '29 thru '51 comp. in lots of 10 or more years, for best offer over $35. The 1929 thru '38 is in good cond., 23 without covers; 1939 thru '51 excel. cond. *Railroad Man's Magazine* 1911, '12 and '18, good cond. 22 old copies for best offer over $5. Many others.

(R) J. C. SENDERAK, 2619 Cortez St., Chicago 22, Ill., will sell *Railroad Magazine* from 1940 to '54, good cond. with covers, unclipped, 25c ea. plus postage, or 5 for $1 plus postage.

(R) R. C. SMATHERS, 205 Poplar St., Grove City, Pa., will sell 250 copies *Railroad Magazine* from June 1932 thru April '54, all excel. cond.; make offer.

ART STENSVAD, 811 E. 3rd, North Platte, Neb., wants size 116 or larger prints and negs. of UP power needed to complete collection of UP locos. Answers all mail.

L. B. SWEET, 4704 Vineta Ave., La Canada, Calif., will sell trainmen's kerosene hand lanterns; has six; $5 ea. postpaid.

Dr. H. G. TEBO, 3831 Arnold, Houston 5, Tex., will buy *Model Craftsman* for Feb., May, July '43; April, May '43.

GEO. WERNER, 1211 Melbourne, Houston 22, Tex., wants Sept., Oct. '46; April, Oct. '47.

(*) GEO. WHITE, 76 Passaic St., Trenton 8, N. J., wants any size photos, any Trenton trolley line.

TOM WILSON, 814 N. Morrison St., Appleton, Wis., wants C&NW negs., any size, esp. nos. 117, 407, 890, 941, 2205, 2208, 2220, 2223, 2225, 2805; will trade or buy.

(*) GARY WILSON, 353 Penn St., Pasadena 6, Calif., wants pix of Milw. Elec. Ry. Light and Power Co., No. 100 and anything else; all Oklahoma Ry., esp. 200s.

(*) WALTER ZULLIG, 475 Oak Ave., Maywood, N. J., sells p.c. size photos Susq., NYC (also West Shore), Erie, LIRR, CNJ, NYNH&H, Rdg., PRR, DL&W; also SIRT, Phila. Trans Co., Phila. Sub. Trans. Co., Public Service Coord. Transp., NYC Trans. Auth. List, 3c stamp.

MODEL TRADING POST

S. BLANC, 1350 Tennyson St., Denver, Colo., will sell Merklin HO 3-rail loco and tender, 3 4-wheel frt. cars, 2 8-wh. pass. cars, trk., all good operating cond., $20 postpaid.

C. BUXTON, R.R. 2, Loveland, O., wants Lionel 773, 763 or 700 Hudson loco and tender or parts. Has new Santa Fe 2343 Twin Unit Diesel loco., antique eqmt., many other locos., cars, switches, acces., to trade or will pay cash.

K. E. GOODSPEED, Box 411, Port Henry, N. Y., has large choice of built-up HO eqmt., engines, frt. and pass. cars to swap for O gage engines, good cond. or in kits; no tinplate; pref. 2-rail. Answers all mail.

DICK GRANOWSKI, 337 N. 9th St., Saginaw, Mich., will sell HO gage eqmt., incl. new Mini-Pike with trk. and roadbed, and HO Mikdao; mags., etc.; everything for $60.

W. P. MILLER, 1447 Church St., Rahway, N. J., will sell for best offer O gage 3-rail Pennsy K4, No. 3 motor, very well detached.

L. D. MOORE, Jr., 2102 Parker Av., Portsmouth, Va., has O gage AF 4-4-2 loco, good cond.; will trade toward O gage AF B&O 4-6-2 loco.

W. D. RICHARDSON, 275 Marion Av., Painesville, O., will sell 250 HO gage frt. cars plus 6 steam-type locos, plus extra parts, all for $300. Will sell locos and cars in smaller groups List, 3c stamp.

GEO. SMITH, 651 W. 137th Pl., Hawthorne, Calif., wants old toy trs., trolleys, parts, in any cond.

F. WALKER, P.O. Box 85, Hitchcock, Tex., will sell or trade 87 ft. new HO brass rail, large lot HO streetcar eqmt., *Model Craftsman, Trains, Model Railroader* Mags.

FLAGSTOPS

PACIFIC COAST CHAPTER, R&LHS, plans "A day in the Redwoods" on Sunday, Sept. 19 via NWP and California Western to Alpine in the heart of the big woods; flat cars with benches on CW. Leave San Refael 7:30 a.m., return 10 p.m. Special reduction if you buy ticket on or before Sept. 15. Contact J. E. Turner, 1739 Berkeley Way, Berkeley, Calif.

* * *

TOLEDO CHAPTER, National Railway Assoc., announces excursion Sunday, Oct. 17, from Toledo, O., to Jackson, Mich., a round trip of 22 miles. Leave Toledo 9 a.m., return about 6 p.m. Rate is $5 if tickets are bought by Oct. 10, thereafter $6. Children 6 to 15, half fare. Write Lloyd A. Brown, Manager, Travel Dept., Toledo Trust Co., Toledo, O.

* * *

FANTRIP is planned by Illini Railroad Club for Sunday, Sept. 19; special 3-car train via Illinois Terminal, leaving Champaign 7 a.m. and returning 9 p.m. Tours of Decatur shops and A. O. Smith body frame plant are included. Fare, about $10. Contact M. H. Klebolt, 301 S. Wright St., Champaign, Ill.

* * *

LOUISVILLE CHAPTER, NRHS, plans fantrip Sept. 26 on the Kentucky & Tennessee to Stearns, Ky., and Brimstone RR, New River, Tenn. Road has two Shay locos, the only ones in service in the area. Train will be pulled by one of them. Also in October (plans indefinite) a trip on the Louisville, New Albany & Corydon RR.

* * *

WE ARE INDEBTED to *The Soo-Liner* magazine for the first picture that heads our *Photos of the Month* in this issue.

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Start as soon as you receive my powerful Free Sales Kit. Many men with no previous experience have made $20 the very first day with this Outfit, introducing our quality products to friends, relatives, fellow workers. You'll be amazed how quickly they buy from you! Here's why:

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To celebrate our Golden Anniversary we are giving costly gifts to Mason men who do a good selling job. There is a prize for practically EVERYBODY! Full details on how much YOU can win will be sent with your Free Sales Kit.

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6 TAPPAN HOLIDAY RANGES!

24 ROTISS-O-MAT ELECTRIC ROTISSERIES!

12 COCKER PUPPIES, CASE OF IDEAL DOG FOOD!

6 COLUMBIA TRU-FIT, $200 DIAMOND RING SETS!

PFAFF DIAL-A-STITCH SEWING MACHINE!

Richard Automatic Gold Watches! ★ Set of **Encyclopedia Britannica!** ★ 11 Piece **Flavor Seal** Cookwear Set! ★ **London Staplers** Made-To-Measure Suit! ★ **Kingston** Vacuum Cleaner Set! ★ **Shopmaster** Power Tool Set! ★ 100 **Eveready** 3-piece Flashlight Sets! ★ 360 **Universal** Pen, Pencil Sets with INK-N-TROL Ball Pen! ★ 100 **Inner Sanctum** Billfold Sets! ★ 100 6-month supplies **B.V.D.'s!** **These are just a few of the exciting prizes! Rush your coupon NOW!**

MASON SHOE MFG. CO. Dept. MA-405
Chippewa Falls, Wisconsin

1 You show a selection of **174 different styles** in dress, sport, work shoes for men and women . . . plus a complete line of jackets!

2 You can fit almost **everybody**, because you feature an amazing range of sizes (2½ - 15) and widths (AAAA - EEEE)!

3 **You draw on our huge stock of 200,000 pairs.** That means you're never "out" of a style, size or width. You beat store competition all hollow!

4 **You feature our exclusive Velvet-eez foamy-soft AIR CUSHION INNERSOLES** . . . a blessing for people who work on their feet . . . like "walking on air"! (Velvet-eez shoes bear the famous Good Housekeeping Seal.)

5 You feature such exciting styles as the fast-selling **shoe & jacket combinations** pictured above. You'll make double profits on each combination you sell!

To start this exciting business **right away,** mail the coupon **now.** I will rush your powerful FREE Sales Kit that contains **everything** you need to start making money the very first hour! I'll also show how you can win exciting Bonus Prizes. Start making as much as $217 **extra** a month . . . rush your coupon TODAY!

RUSH FOR FREE SALES KIT!

Mr. Ned Mason, Dept. MA-405
Mason Shoe Mfg. Co., Chippewa Falls, Wisconsin

You bet I want a business that brings in exciting cash profits every month! Rush my money-making FREE Sales Outfit, so I can start earning $217 EXTRA income in spare time. Also rush details on how I can win valuable Bonus Prizes!

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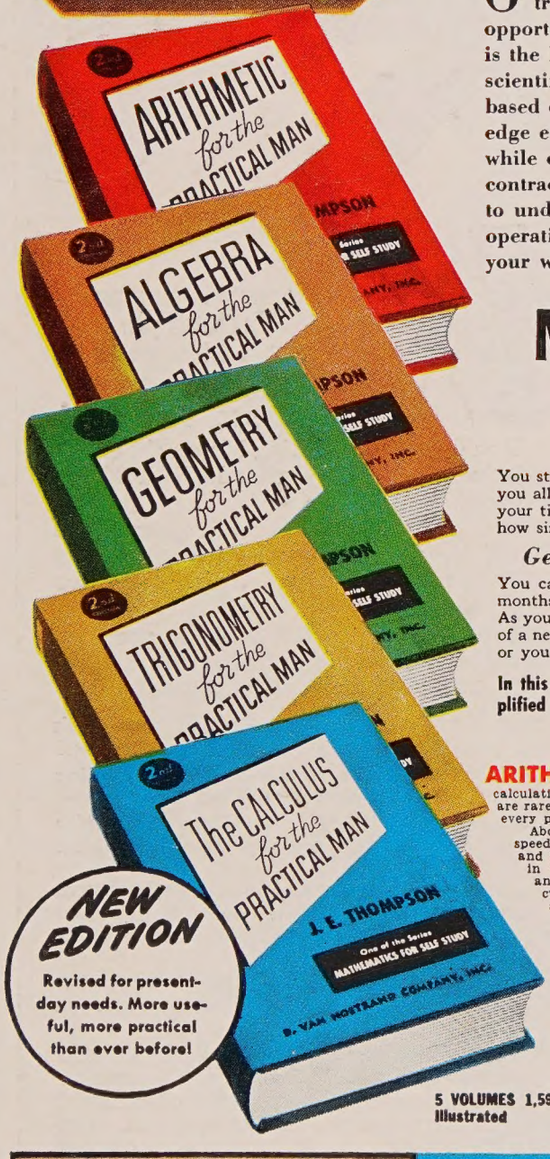
THIS COMPLETE, SIMPLE, PRACTICAL COURSE FOR SELF-INSTRUCTION WILL QUICKLY GIVE YOU *a complete mastery of* MATHEMATICS

The essential knowledge for THE BETTER JOBS IN EVERY BUSINESS AND INDUSTRY

GET a better job in America's great industries, and prepare to seize your coming opportunities—learn mathematics. Mathematics is the basic requirement of all mechanical and scientific work, and of all business or industry based on science. Without this essential knowledge even the most capable man is left behind while others forge ahead to better jobs, bigger contracts, more money. You need mathematics to understand all technical work, to supervise operations, to improve, speed up and check on your work and the work of others. Such basic training is quickly recognized today and gladly paid for. It singles you out from the crowd and gives you an advantage whether it is a matter of a job, a promotion or a contract. Now you can learn mathematics—the foundation of all technical work—by an easy, inexpensive and time-saving method. A very simple and extremely interesting course in book form has been prepared for you by an expert who has devoted a life-time to teaching practical men the fundamentals of this important subject. Every minute you spend on this course will pay you big dividends.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By J. E. Thompson, B.S. in E.E., A.M., Dept. of Mathematics, Pratt Institute

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